

# **Comprehensive Annual Financial Report**

**For the Fiscal Year Ended December 31, 2002**



**COLORADO  
PERA®**

**Personal.  
Innovative.  
Secure.**

*Colorado Public Employees' Retirement Association*

**Comprehensive Annual Financial Report**

**For the Fiscal Year Ended December 31, 2002**

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Colorado Public Employees' Retirement Association  
1300 Logan Street  
Denver, Colorado 80203  
303-832-9550  
[www.copera.org](http://www.copera.org)

*Prepared by the PERA Staff*



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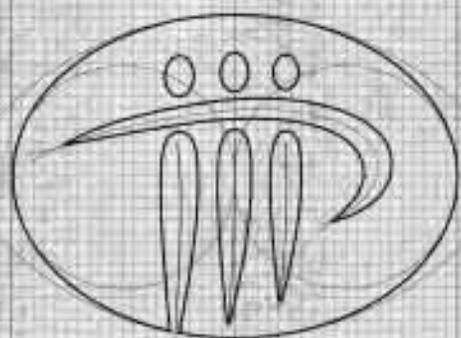
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## ***Introductory Section***

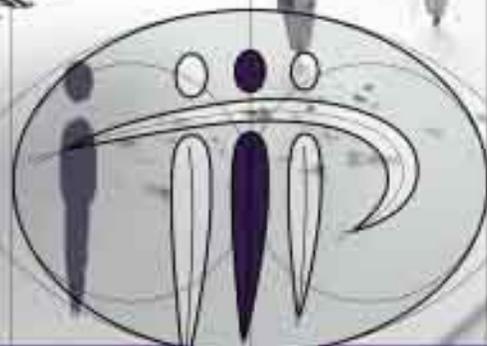
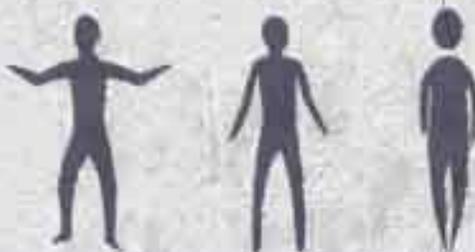


COLORADO  
PERA



*The stylized letter "P" represents PERA*

*Three people represent the upward stroke of the letter. The first person on the left breaks into the picture from the outside and appears to grow up from the ground. PERA itself is grounded in a 70-year history that predates Social Security. PERA is grounded in Colorado—as secure as state government itself. But most of all, PERA is grounded in its people.*





## Letter of Transmittal



## Colorado Public Employees' Retirement Association

Mailing Address: PO Box 5800, Denver, CO 80217-5800

Office Locations: 1300 Logan Street, Denver, Colorado  
1120 West 122nd Avenue, Westminster, Colorado  
303-832-9550 • 1-800-759-7372 • www.copera.org

June 2, 2003

## Dear Members of the Board of Trustees,

I am pleased to present Colorado PERA's *Comprehensive Annual Financial Report (CAFR)* for the fiscal year ended December 31, 2002. We are proud of PERA's achievements during the year, and we will continue striving to improve service to our members and benefit recipients in the future. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation rests with PERA's management.



## Plan Overview

Colorado PERA was established in 1931 by the Colorado General Assembly as an instrumentality of the state. Initially covering only state employees, the Plan has expanded to include all Colorado school districts except Denver, the State's judicial system, numerous municipalities, and other government entities. The Plan's purpose is to provide benefits to members at retirement or in the event of disability, or to their survivors upon the member's death. The Plan is funded on an actuarial reserve basis, with money being set aside for benefits while the benefits are being earned and before they are paid.

## Major Initiatives

Major legislation initiated by the Colorado PERA Board of Trustees and enacted into law during the past decade established PERA as an innovative public pension leader. In recognition of higher liabilities associated with PERA's successive benefit improvements, and the prolonged market downturn, the Board did not propose significant changes to the PERA program in the 2002 legislative session.

Since the "Study of Retirement Plan Designs" was submitted in December 2001 by the Office of State Auditor to the Legislative Audit Committee, pursuant to Senate Bill (SB) 01-149, the Board has conducted a comprehensive review of plan design alternatives. Although the Study found that Colorado PERA compared very favorably to other public and private sector plans, due to PERA's high benefits and portability, low costs, and blend of Defined Benefit (DB) and Defined Contribution (DC) features, the Board believed its long-term commitment to providing attractive, equitable, and cost-effective benefits for all members obligated it to review the feasibility of offering a choice of retirement plans.

With the assistance of Colorado PERA's staff and Buck Consultants, the Board of Trustees examined demographic, cost, administrative, and associated implications of all plan designs, with particular attention paid to alternatives that would suit both long- and short-term plan members. The "PERA Choice" proposal that was considered by the Board in

September 2002 was designed to include the desired attributes of a DC Plan (self-directed investments, vesting of employer contributions) with desired attributes of PERA's DB plan (safety net benefits, annual post-retirement increases, and survivor benefits), and allow members to change participation between the current PERA DB plan and a future PERA DC plan in a sound way. Concerns related to the PERA Choice plan's complexity, cost, and attractiveness led the Board to oppose seeking 2003 legislation that would add the PERA Choice option to PERA's benefit structure. This finding was communicated to the Legislative Audit Committee.

In 2002, two bills were passed and signed into law that directly affect Colorado PERA:

- SB 02-106 ("Conformance of Public Employee Retirement Plans With the Federal Internal Revenue Code") was initiated by Colorado PERA to conform certain provisions of PERA law to the federal "Economic Growth and Tax Relief Reconciliation Act of 2001" (EGTRRA). The legislation allows members who are age 59½ or over to purchase PERA service credit using direct rollovers of 403(b) plan accounts. The new law also allows 457 and 403(b) plan DC account holders to have the court divide their accounts in case of divorce. The bill was signed by Governor Owens on March 27, 2002, and became effective on that date.
- SB 02-145 ("Critical Teacher Shortage") permits small school districts to declare a "critical shortage" of teachers and employ PERA service retirees full-time in teaching positions without reducing the retiree's PERA benefit. The bill was effective on April 3, 2002, with the Governor's signature.

A third bill was enacted and signed into law last year that affects Colorado PERA indirectly. Senate Bill 02-231 ("Consolidation of State Defined Contribution Plans") transfers management of the State Defined Contribution (DC) Plan for elected officials under Internal Revenue Code Section 401(a), to the State Deferred Compensation Plan Committee, which administers the optional tax-deferred retirement plan for state

employees under Internal Revenue Code Section 457. The bill also allows the plans to assess participant fees and receive vendor payments for administrative costs, and provides that the two DC plans remain separate. The bill was signed by Governor Owens on June 1, 2002, and became effective on July 1, 2002.

The following proposals that would have affected Colorado PERA were not passed in the 2002 session:

- House Bill 02-1184 (“Expand the State Defined Contribution Retirement Plan”). The legislation would have allowed new state employees hired beginning in 2003 not eligible to participate in a higher education institution’s optional retirement plan to join the State DC Plan instead of PERA. The bill would have also allowed current employees in certain state classified job categories to have that option.
- Senate Joint Resolution 02-004 (“Auditing Reform”) was proposed requesting that the State Auditor, the State Treasurer, and the Colorado PERA Board of Trustees only retain accounting firms that adhere to or support reform measures proposed by the Council of Institutional Investors. The resolution died on May 8, 2002, with the Senate’s adjournment.
- “Contribution Reduction and Repayment.” In February 2002, in response to the state’s budget crisis, the Joint Budget Committee and the Governor’s Office of State Planning and Budgeting proposed cutting the State employer contributions in half to Colorado PERA from the March 2002 through June 2002 payroll periods. PERA suggested that any State contribution reduction be repaid with interest at 8.75 percent (PERA’s actuarial investment assumption) over a one-, two-, or three-year period. However, the State subsequently withdrew this proposal from consideration.

### Accounting System and Reports

This CAFR was prepared to conform with the principles of governmental accounting and reporting set forth by the Governmental Accounting Standards Board (GASB) in Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, and Statement No. 26, *Financial Reporting for Postemployment Healthcare Plans Administered by Defined Benefit Pension Plans*, as well as generally accepted accounting principles that apply to government accounting for fiduciary funds.

GASB Statement No. 25 establishes financial reporting standards for defined benefit plans and standards for the notes to the financial statements of defined contribution plans. GASB Statement No. 26 provides financial reporting guidance for defined benefit pension plans that administer postemployment health care plans.

In June 1999, the GASB issued Statement No. 34, *Basic Financial Statements—Management’s Discussion and Analysis—for State and Local Governments*: (GASB 34) and in June 2001 the GASB issued Statement No. 37, *Basic Financial Statements—and Management’s Discussion and Analysis—for State and Local Governments: Omnibus*, which amended certain provisions of GASB 34. Although not required to implement GASB 34 until calendar year 2003, PERA elected to adopt the new pronouncement early, as amended, for the year ended December 31, 2001.

GASB 34 had no monetary impact on the financial statements of PERA, but does require additional disclosure. As a result of the adoption of GASB 34, the Management’s Discussion and Analysis has been included as required supplementary information and precedes the financial statements.

The accompanying financial statements are prepared using the accrual basis of accounting. Member and employer contributions are recognized in the period in which employee services are performed. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made.

State law requires that the State Auditor perform an annual audit of PERA. Pursuant to this requirement, the Denver office of PricewaterhouseCoopers LLP audited PERA’s 2002 financial statements under the control and oversight of the State Auditor. PERA continues to maintain strong internal controls in all operational areas.

### Recognition of Achievements

The Government Finance Officers Association (GFOA) of the United States and Canada awarded a Certificate of Achievement for Excellence in Financial Reporting to Colorado PERA for its comprehensive annual financial report (CAFR) for the fiscal year ended December 31, 2001. The GFOA’s Certificate of Achievement is the highest form of recognition in the area of public employee retirement system accounting and financial reporting. To receive this award, a government unit must publish an easily readable and efficiently organized CAFR that meets or exceeds program standards, and satisfies both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for only one year. PERA has been awarded this distinction for the last 17 years. We believe this CAFR continues to meet GFOA requirements. Therefore, we are submitting it to the GFOA to determine its eligibility for another Certificate.

### Additions/Deductions to Plan Net Assets

The collection of employer and member contributions, and income from investments provide the reserves needed to finance the survivor, disability, retirement, and health care benefits. Defined benefit, health care, and 401(k) Plan contributions and investment income (loss), including unrealized gains and (losses) for 2002, totaled (\$1,891,312,000).

Member contributions increased by \$45,428,000 (8.0 percent) and employer contributions increased by \$25,869,000 (5.5 percent). The rise in member contributions was attributed to members’ increased voluntary 401(k) Plan contributions related to MatchMaker allocations and increased membership and salary increases in the defined benefit plans.

In addition, the level of service purchases increased by \$234,726,000 from 2001 as the membership saw the attractiveness of purchasing service in comparison to other investment opportunities. In 2001, income from service purchases totaled \$127,383,000 compared to \$362,109,000 in 2002.

The primary expense of a retirement system is the disbursement of retirement and survivor benefits. These recurring benefit payments, along with refunds of contribution accounts to members who terminate employment, subsidies toward health care premiums, and the cost of administering PERA comprise the total expense. In 2002, deductions

totaled \$1,715,713,000, an increase of 13.6 percent from 2001, largely due to an increase in retirement benefits.

Owing primarily to negative investment returns of \$3,414,851,000, the net change to the plan was a decrease of \$3,607,025,000 during 2002.

Administrative expenses are controlled by an annual budget approved by the PERA Board of Trustees and represented less than 0.1 percent of total assets.

### Economic Condition and Outlook

The U.S. economy continued to languish in 2002. The nation's average unemployment rate rose from 4.8 percent in 2001 to 5.8 percent in 2002. Non-farm employment declined 0.9 percent compared with a 0.2 percent increase the year before. In 2002, imports of goods and services rose 3.5 percent after falling 2.9 percent in 2001. Exports of goods and services fell 1.3 percent, following a 5.4 percent decline in 2001.

However, several leading economic indicators were positive. Inflation-adjusted gross national product growth averaged 2.4 percent in 2002, after averaging only 0.3 percent in 2001. Personal income rose 3.0 percent, slightly less than the 3.3 percent increase of 2001. Consumer spending increased 3.1 percent in 2002, following a 2.5 percent gain in 2001. Real disposable personal income (after taxes and adjusted for inflation) increased 4.5 percent, compared with a 1.8 percent rise in 2001. Lower energy prices helped decrease the average consumer inflation rate from 2.8 percent in 2001 to 1.6 percent in 2002. Retail sales grew 3.5 percent on average in 2002, slightly less than the 3.8 percent gain posted in 2001. Continued record-low interest rates aided the nation's residential housing market last year. The number of residential housing permits rose 7.3 percent, which surpassed the 2.8 percent increase in 2001. Federal government spending rose from 4.8 percent to 7.4 percent in 2002.

The Colorado economy remained in a recession in 2002 with nearly all economic indicators very weak, if not negative, for the year. Non-farm employment declined 1.9 percent in 2002, after a slight gain of 0.6 percent in 2001. The average seasonally adjusted unemployment rate climbed from 3.7 percent in 2001 to 5.7 percent. The loss of nearly 43,000 jobs in 2002 marked the fourth time that the state lost jobs since World War II, but Colorado's 2002 job losses were the most severe of the four occasions. Employment fell in most industries, and the information technology sector was one of the hardest hit sectors, with 45 percent of information technology firms reducing their workforces.

Consumer spending in the state declined 0.8 percent in 2002, after a 1.8 percent gain in 2001. Low retail trade was attributed to mounting consumer anxiety about rising unemployment, the poor stock market, weak travel market, and deflationary pressures for goods. Personal income rose 1.5 percent, while wage and salary income decreased 1.2 percent in 2002.

In 2002, residential and multi-family housing permits fell 12.2 percent and 31.4 percent, respectively, after gaining 1.5 percent and 12.5 percent, respectively, the year before. The non-residential construction sector was affected by rising vacancy rates in metro-Denver that climbed to almost 20 percent. Non-residential construction plunged 20.9 percent in 2002, after gaining 0.7 percent in 2001. Retail construction fell 8.3 percent, compared with a 12.7 increase in 2001. Office and factory construction posted major declines of 43.8 percent and 77.3 percent, respectively, in 2002.

The state's economic slowdown provided one benefit: lower inflation, with the Denver-Boulder-Greeley inflation rate falling to 1.9 percent in 2002 from 4.7 percent in 2001. Colorado's population grew by 1.7 percent in 2002, which was the lowest growth rate for the state since 1990, when the state's population rose 0.6 percent. Despite the relatively low increase in population, Colorado was the sixth-fastest growing state in 2002.

### Investments

Investment portfolio income is a major source of revenue to Colorado PERA. The Investment Committee oversees the Fund's portfolio, managers, and performance. It also reviews and approves potential investment opportunities, with input from PERA staff members.

In 2002, there was a net investment loss of \$3,414,851,000 compared with total contributions by members and employers of \$613,654,000 and \$498,951,000, respectively.

	<u>Additions to Plan Net Assets (in thousands)</u>
Net Investment Income	(\$3,414,851)
Contributions:	
Member	613,654
Employer	498,951
Purchased Service	362,109
Retiree Health Care Premiums	48,825
Total Contributions	<u>1,523,539</u>
<b>Total Additions to Plan Net Assets</b>	<b><u>(\$1,891,312)</u></b>
	<u>Deductions from Plan Net Assets (in thousands)</u>
Benefits	\$1,490,688
Refunds	199,140
Disability and Life Insurance Premiums	4,450
Other	(2,003)
Administrative Expenses	23,438
<b>Total Deductions from Net Assets</b>	<b><u>\$1,715,713</u></b>

For the year ended December 31, 2002, the total Fund had a rate of return of (11.8) percent on a market value basis. PERA's annualized rate of return over the last three years was (6.6) percent, and over the last five years it was 2.3 percent. The average annualized market rate of return over the last 10 years was 8.3 percent. PERA assumes an investment return of 8.75 percent over the long term.

Proper funding and healthy investment returns are very important to the financial soundness of Colorado PERA. Changes in the composition of the portfolio are reflected in the "Investment Summary" on page 46.

An integral part of the overall investment policy is the strategic asset allocation policy. The targeted strategic asset allocation is designed to provide an optimal diversification to reduce risk and maximize total rate of return relative to risk. This emphasizes a maximum diversification of the portfolio that protects the Fund from declines that a particular asset class may experience in a given period. Both traditional and nontraditional assets are incorporated into the asset allocation mix.

In the summer of 2002, Barclays Global Investors (BGI) completed an asset/liability study of the Fund per the PERA Board of Trustees' directive. In September, the Board voted to establish the following new asset

allocation policy that reflects the portfolio's increased bond investments to meet the Fund's future liabilities:

Domestic Stocks 45%, International Stocks 14%, Alternative Investments 8%, Timber 1%, Real Estate Equity and Debt 7%, and Domestic and International Fixed Income 25%.

In November, the Board approved an implementation timeline for the new asset allocation model. The timeline moves the fixed income portfolio allocation to 20 percent (the target range's low end) by the end of January 2004, with all asset classes in their target ranges by early 2005. An explanation of PERA's investment policies and strategies, including the new asset allocation targets and ranges, are presented in the "PERA Report on Investment Activity" on page 44.

## Funding

The bottom line for a retirement system is its level of funding. If the funding level is adequate, the ratio of total accumulated assets to total liabilities will be larger and more funds will be available for investment purposes. Also, an adequate funding level gives the participants assurance that their pension benefits are secure. The advantage of a well-funded plan is that participants can see what assets are committed to the payment of promised benefits.

The Colorado PERA funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service earned in that year by PERA members. If the retirement system follows level contribution rate financing principles—as PERA does (with current service financed on a current basis)—the system will be able to pay all promised benefits when due. This is the ultimate test of financial soundness.

The "funding ratio" calculation is one way to measure a retirement system's funding progress. PERA directs its efforts at keeping the funding ratio (the ratio of assets to accrued liabilities) for the three divisional retirement funds at a minimum of 80 percent. On December 31, 2002, PERA's funding ratio equaled 88.3 percent.

	Funding Ratio	Amortization Period
State and School Division	87.9%	Infinite
Municipal Division	93.6%	Infinite
Judicial Division	98.3%	13 years
Health Care Trust Fund	19.9%	20 years

PERA's independent retained actuary conducts a five-year experience study, which compares actual to expected results on all PERA actuarial assumptions and is used to project the Plan's future experience. The most recent experience study was completed in 2001 based on the 1996–2000 period by Watson Wyatt, who served as the independent retained actuary throughout 2001.

A review of PERA's actuarial valuation and processes is performed by another external actuarial consulting firm every five years. The most recent actuarial review was conducted in 2001 by Gabriel, Roeder, Smith & Company (GRS) before GRS acquired Watson Wyatt's U.S.-based public sector retirement practice and became PERA's independent retained

actuary. New assumptions recommended by Watson Wyatt and reviewed by GRS were adopted by the Board and first incorporated in the December 31, 2001, valuation. A presentation of PERA's actuarial methods and assumptions is provided in the Actuarial Section of this CAFR on page 60.

## Professional Services

Professional consultants are chosen by the Board of Trustees to perform professional services that are critical to Colorado PERA's operation. The opinions of PricewaterhouseCoopers LLP, the independent certified public accounting firm that provides financial statement audit services for PERA, and GRS, the actuarial firm that conducts PERA's annual actuarial valuation, are included in this CAFR. This Introductory Section includes a listing of the major investment, actuarial, and other consultants that provide professional services to PERA.

## Review of Operations and Activities in 2002

In 2002, Colorado PERA's Board of Trustees and staff devoted significant effort to a major strategic planning initiative approved by the Board in 2001. Completion of this initiative will ensure that PERA remains one of the leading retirement plans in the nation. By the end of 2002, the Board had adopted new policies in the following strategic areas based on recommendations from staff task forces with expertise in these areas:

- **Statement of Strategic Direction**

To ensure that PERA's staff and Board strive toward common goals, the Board approved a formal outline of PERA's position concerning its constituents, products and services, and role with respect to State policy decisions. The Board also adopted the following new mission and vision statements that conform to PERA's revised strategic direction plan.

*Mission Statement:* To promote long-term financial security for our membership while maintaining the stability of the fund.

*Vision Statement:* To become the retirement plan of choice for all Colorado public employees.

- **Health Care Study**

The Health Care Study Team and Towers Perrin worked to benchmark the PERACare program against the competitive market, understand the value that PERACare delivers based on participant feedback, and outline feasible alternatives. Based on the Team's findings that PERACare provides a unique value to many benefit recipients and employers, is a strong alternative for employers, and that PERACare participant satisfaction levels exceed national benchmarks, the Board accepted the recommendation that PERA continue to offer health care programs.

- **Asset/Liability Study**

PERA conducts a periodic asset/liability study to thoroughly review the Fund's long-term investment profile and guide all investment decisions. In March, the Board selected Barclays Global Investors (BGI) to perform the asset/liability study; PERA's last asset/liability study was conducted in 1999. Consideration of the asset/liability study findings, as well as critiques of this study from Mercer Investment Consulting, Pension Consulting Alliance, Watson Wyatt/GRS, and Buck Consultants, led the Board to establish a new asset allocation model in September. The new model reflects an

increased portion of the portfolio being invested in bonds to meet the Fund’s future liabilities. In November, the Board approved an implementation timeline that moves the fixed income portfolio allocation to 20 percent (the target range’s low end) by the end of January 2004, with all asset classes in their target ranges by early 2005.

• **Study of Retirement Plan Design Issues**

Throughout 2002, with the assistance of the staff and Buck Consultants (“PERA DC Plan Design Initiative Task Force”), the Board examined demographic, cost, administrative, and alternative plan design considerations, with particular attention paid to plans that would suit both long- and short-term plan members.

The PERA DC Plan Design Initiative Task Force developed a “PERA Choice” proposal that was designed to include the desired attributes of a DC Plan (self-directed investments, vesting of employer contributions) with desired attributes of the PERA DB plan (safety net benefits, annual post-retirement increases, portability, ability to change initial election decision) while retaining PERA’s control of the new component, and minimizing adverse selection. In September 2002, concerns related to the complexity, cost, and attractiveness of the PERA Choice plan led the Board to oppose seeking legislation in 2003 that would add the PERA Choice option to PERA’s benefit structure. This finding was communicated to the Legislative Audit Committee.

• **Human Resources Policy Framework Development**

The Board approved a formal human resources philosophy that is designed to meet PERA’s current and future recruiting, hiring, training, and retention needs.

• **Member Services and Performance Benchmark Development**

As part of its strategic planning process, the Board directed staff to research best customer service industry practices. In October, the Board’s Benefits Committee approved staff recommendations that will improve telephone call response times, increase quality monitoring, and establish e-mail response time standards in PERA’s Customer Service Center.

• **Investment Philosophy Documentation**

A formal statement of PERA’s investment philosophy was approved by the Board which included performance management/risk control, asset allocation, operating costs, diversification, and passive/active management considerations, as well as the history, current status, and management structure of PERA’s Investment Department.

• **Cash Management Program Review**

A cash management program was authorized by the Board to better identify, monitor, and meet PERA’s short-term and medium-term cash needs.

(The *Public Relations Strategy* and *Establishing a Governance Model* initiatives were completed in 2001; the *Technology Plan* initiative was completed in 2003.)

In 2002, the Board prepared two 2003 legislative proposals. Senate Bill 98 (“Modification of PERA Benefits Provisions”), was signed by the Governor on June 5, 2003. One of SB 98’s provisions set a 10-year limit on the total amount of PERA service credit that can be purchased by a PERA member,

effective November 1, 2003. This 10-year limit does not include reinstatements. Senate Bill 101 (“Contribution Stabilization”) was vetoed by the Governor on May 22, 2003. See Note 9 on page 34 for information on this legislation.

On November 15, 2002, the Board voted to increase the rates for PERA service credit purchases, effective November 1, 2003, as follows.

	Age at Purchase	
	Under Age 50	Age 50 and Over
Judges	21.75% of HAS	25.75% of HAS
State Troopers & CBI Agents	22.85% of HAS	26.85% of HAS
All Other Members	18.10% of HAS	22.10% of HAS

Colorado PERA devotes much effort in communicating and advising members and retirees about their current or future benefits. In 2002:

- Over 25,500 PERA members, retirees, and other persons attended PERA meetings. About 1,900 of the 4,500 members who received individual counseling chose to do so at PERA’s new satellite office (“The Pointe”), north of the metro-Denver area.
- The Customer Service Center handled 254,200 calls, responded to nearly 18,000 e-mails, and assisted 12,400 visitors to PERA.
- 138 group counseling sessions were held and attended by about 1,300 members.
- Field Education staff conducted 121 benefit information meetings and 34 retirement process meetings; over 4,500 people attended those meetings. About 4,100 persons were contacted at 95 information tables. In addition, four training meetings educated close to 80 PERA-affiliated employer staff members on procedures and policies.
- The Communications staff handled approximately 140 media calls/interviews, produced 2,300,000 publications, and created 900 graphic services presentations/visuals.
- The Benefit Services Division responded to nearly twice the number of requests from individual members and retirees in 2002 compared to 2001. The most significant increases were in individual counseling requests, retirement benefit estimates, and service purchase requests.
- New or updated PERA Account Personal Identification Numbers (PINs) were requested by about 19,400 PERA members, and close to 160,000 PERA publications were ordered through PERA’s Web site. Approximately 112,200 members used their PINs to view their PERA salary history, service credit balance, beneficiaries, and other personal PERA account information on PERA’s Web site.

Last year, Colorado PERA broadened outreach efforts with PERA members, the media, and state legislators.

- PERA Executive Director Meredith Williams held “listening tours” throughout the state to hear members and benefit recipients’ thoughts on PERA. Topics covered at these meetings included a review of: PERA’s funding status and market performance, DB versus DC plans, legislative issues, and the MatchMaker and PERACare programs.
- A “Media Room” that is accessed from the PERA home page was developed to facilitate better communications between PERA and the

media. This site provides immediate access to the latest information on PERA's investments, legislation, Board of Trustee meetings, membership data, and many PERA publications.

- The PERA Ambassadors Program was expanded to increase state legislators' knowledge and support of PERA. Since 1998, a select group of knowledgeable PERA retirees and members ("Ambassadors") have volunteered to serve as advocates of the PERA program. In 2002, there were 100 Ambassadors and 10 Ambassador meetings attended by 175 individuals.

In 2002, the Governor's Office of Innovation and Technology announced that Colorado PERA and ITU Ventures, LLC, a leading venture capital firm, had formed an \$11 million partnership to invest in technology emerging from Colorado's research institutions. ITU assists the commercial growth of technologic innovation by working with researchers, administration and university technology transfer offices.

Also in 2002, Kevin Kester, PERA's Director of Alternative Investments, was named a director for the Institutional Limited Partners Association, and Steve Brown, PERA's Deputy Executive Director for Support Services, was named to the Government Finance Officers Association (GFOA) committee that develops policy for public pension plans.

### 401(k) Plan Activities

In 2002, 401(k) Plan net assets grew from \$674,618,000 at the end of 2001 to \$737,849,000 at the end of 2002, with 70,664 participant accounts in the Plan by the close of the 2002 year. The number of participants in the 401(k) Plan grew by 9 percent in 2002, compared with the previous year.

In 2002, 5,155 Colorado PERA members transferred 401(k) Plan account funds (which totaled \$82 million) to purchase PERA service credit. This represented a 116 percent increase in the number of members who transferred 401(k) Plan funds to purchase PERA service credit in 2001, and a 142 percent increase in the 401(k) Plan dollars that were transferred to purchase PERA service credit compared with 2001 activity in this area.

Also in 2002, the Board set the 2003 MatchMaker allocation to equal a 100 percent match of members' voluntary contributions to eligible tax-deferred DC retirement plans, up to a maximum of the following percentages of PERA-includable salary per pay period: 2 percent for State and School Division members, 2 percent for Municipal Division members, and 6 percent for Judicial Division members.

### Employer Affiliations

Ten new public employers affiliated with Colorado PERA in 2002: Adams and Jefferson County Hazardous Response Authority, Adams County Housing Authority, Arkansas Valley Regional Library Service System, Colorado District Attorneys Council, Durango Fire and Rescue Authority, Grand Valley Fire Protection District, Green Mountain Water and Sanitation District, Meeker Sanitation District, Pathfinder Regional Library Service System, and the Town of Lochbuie. In January 2003, the City of Las Animas and Meeker Cemetery District affiliated with PERA.

### Board-Related Activities

Donna Bottenberg (State Category) and Kim Natale (School Category), were re-elected to serve four-year terms on the Board of Trustees. Since

Board incumbent Mark Anderson ran unopposed from the Municipal Division, the Board appointed Anderson to a four-year term beginning July 1, 2002.

The Board appointed F. Elizabeth Friot to fill a vacancy created by the retirement of Gordon East (State Category). This seat will be up for election in 2003. Friot was a runner-up in the 2002 Board election for the State Category. Gary Kasson (State Category) resigned from the Board effective January 1, 2003.

### Acknowledgements

The cooperation of our affiliated employers contributes significantly to Colorado PERA's success. We thank the staff and management of these employers for their continuing support.

The compilation of this CAFR reflects the combined efforts of PERA staff. It is intended to provide complete and reliable information as a basis for making management decisions, determining compliance with legal provisions, and determining responsible stewardship of assets contributed by the members and their employers.

This CAFR is being mailed to all affiliated employers and other interested parties; a summary will be sent to members and benefit recipients. An electronic version is available on the Colorado PERA Web site at [www.copera.org](http://www.copera.org).

I would like to express my gratitude to the staff, Board of Trustees, and consultants who worked diligently to ensure the successful operation of Colorado PERA in 2002.

Respectfully submitted,

Meredith Williams  
Executive Director

Certificate of Achievement



### Board Chair's Report



#### Colorado Public Employees' Retirement Association

Mailing Address: PO Box 5800, Denver, CO 80217-5800

Office Locations: 1300 Logan Street, Denver, Colorado  
1120 West 122nd Avenue, Westminster, Colorado  
303-832-9550 • 1-800-759-7372 • [www.copera.org](http://www.copera.org)

June 2, 2003

#### To All Colorado PERA Members, Benefit Recipients, and Employers:

As Chair of the Board of Trustees for the Colorado Public Employees' Retirement Association, I am pleased to present Colorado PERA's 2002 *Comprehensive Annual Financial Report (CAFR)*. This CAFR offers a detailed view of the financial and actuarial status of your retirement system.

The U.S. economy remained weak last year, as concerns mounted over the threat of terrorism and the prospect of war with Iraq. The stock market declined for the third consecutive year, with investor confidence severely shaken by corporate scandals. Despite a solid rally in the final months of 2002, all major equity indices ended the year with double-digit losses. The Standard & Poor's 500 Index plummeted 22.1 percent—its worst annual performance since 1974—and the Colorado PERA Fund declined 11.8 percent due to equity exposure in its diversified portfolio.



However, it is important to keep the past year's discouraging returns in perspective.

- Colorado PERA enjoyed double-digit positive returns in 14 of the last 23 years due to its outstanding stock investments. The PERA Fund's diversified investment mix is designed to optimize returns and minimize risk over a long-term time horizon.
- Since 1926, the U.S. stock market has gained 10.2 percent per year, on average. During this 77-year history, there were 43 years of positive double-digit returns. Domestic stock investments are expected to return to their historical range, though not at the unprecedented highs experienced from 1980 until 2000.

To ensure Colorado PERA's continued competitiveness in the years ahead, the PERA Board of Trustees developed a major Strategic Planning Initiative in 2001. One of the Initiative's components included a comprehensive Asset/Liability Study, which was completed last summer. Based on the Study, the PERA Board adopted a new asset allocation model with increased bond investments.

Also in 2002, the Colorado PERA Board of Trustees made the difficult but prudent decision to set the cost of purchasing service credit, effective November 1, 2003, closer to PERA's actuarial cost of service credit purchases. This action will assist in managing future Plan liabilities.

In closing, on behalf of the Board, I extend appreciation for your continued support and interest in Colorado PERA. Our commitment as Trustees of the PERA Plan is to provide competitive benefits while ensuring the integrity of the Fund remains strong.

Sincerely,

J. Kim Natale  
Chair, Board of Trustees

Board of Trustees

By state law, the management of the public employees' retirement fund is vested in the Board of Trustees of the Colorado Public Employees' Retirement Association. The Board is composed of 16 members, including the State Auditor and the State Treasurer as ex-officio members. The 14 representative members are elected by mail ballot by their respective Division members to serve on the Board for a four-year term. Five members are elected from the School Category and four from the State Category in the State and School Division, two from the Municipal Division, and one from the Judicial Division. Two members are elected by benefit recipients. If a Board member resigns, a new member is appointed from the respective Division for the remainder of the year until the next election.



**J. Kim Natale, Chair**  
*Math and Science Teacher*  
 Jefferson County School District R-1  
 Current term expires June 30, 2006



**James Casebolt, Vice Chair**  
*Judge*  
 Colorado Court of Appeals  
 Current term expires June 30, 2003



**Mark J. Anderson**  
*Insurance and Claims Manager*  
 City of Colorado Springs  
 Current term expires June 30, 2006



**Edward W. Bohac**  
*Retired College Fiscal Administrator*  
 Current term expires June 30, 2003



**Donna J. Bottenberg**  
*Professor and Director of the Center for Professional Development*  
 University of Northern Colorado  
 Current term expires June 30, 2006



**Terry L. Campbell**  
*Colorado State Patrol Sergeant*  
 Current term expires June 30, 2004



**Michael H. Coffman**  
*State Treasurer*  
 Ex-officio member; continuous term



**Julie A. Coleman**  
*Physical Education Teacher*  
 Mesa County Valley School District 51  
 Current term expires June 30, 2003



**Gordon P. East**  
*Lands Unit Supervisor*  
 Colorado Division of Wildlife  
 Resigned July 2002



**F. Elizabeth Friot**  
*Professor of Secondary Education*  
 Metropolitan State College of Denver  
 Current term expires June 30, 2003



**Joanne Hill**  
*State Auditor*  
 Ex-officio member; continuous term



**L. Gary Kasson**  
*Police Officer*  
 Auraria Higher Education Center  
 Resigned January 2003



**Patricia K. Kelly**  
*City Attorney*  
 City of Colorado Springs  
 Current term expires June 30, 2003



**Richard Lansford**  
*Retired Teacher*  
 Current term expires June 30, 2005



**Amy L. Nichols**  
*Math Teacher*  
 Aurora Public Schools  
 Current term expires June 30, 2004



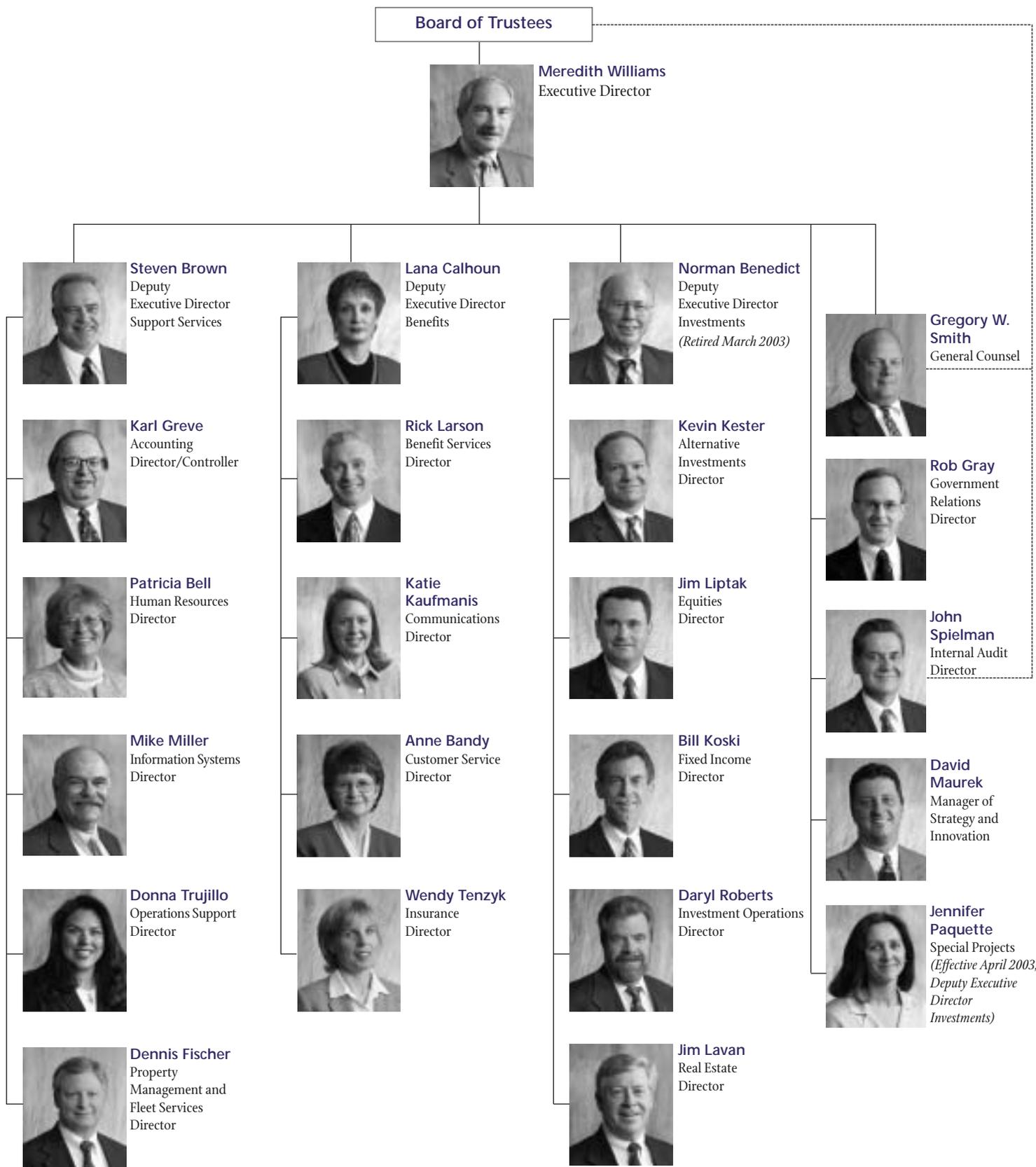
**Scott L. Noller**  
*Business Teacher*  
 Colorado Springs School District #11  
 Current term expires June 30, 2005



**Gloria Santistevan-Feedback**  
*Math Teacher*  
 Pueblo School District #60  
 Current term expires June 30, 2005

# Administrative Organizational Chart

As of May 1, 2003



## Consultants

### Asset/Liability Study Consultant

Barclays Global Advisors  
45 Fremont St.  
San Francisco, CA 94105

### Health Care Program Consultant

Leif Associates, Inc.  
1515 Arapahoe St.  
Tower 1, Suite 410  
Denver, CO 80202

### Independent Accountants

PricewaterhouseCoopers LLP  
1670 Broadway, Suite 1000  
Denver, CO 80202

### Investments—Economists

Decision Economics, Inc.  
530 5th Ave., 7th Floor  
New York, NY 10036

The Northern Trust Company  
50 South LaSalle St.  
Chicago, IL 60675

### Investment Performance Analysts

R.V. Kuhns & Associates, Inc.  
805 SW Broadway, Suite 2200  
Portland, OR 97205

The Northern Trust Company  
50 South LaSalle St.  
Chicago, IL 60675

### Investments—Portfolio Consultant

Mercer Investment Consulting, Inc.  
777 South Figueroa St., Suite 2000  
Los Angeles, CA 90017

### Investments—Real Estate Performance

Russell Real Estate Advisors, Inc.  
4330 La Jolla Village Dr., Suite 300  
San Diego, CA 92122

### Master Custodian

The Northern Trust Company  
50 South LaSalle St.  
Chicago, IL 60675

### Pension and Health Care Program Actuary

Gabriel, Roeder, Smith & Company  
5605 N. MacArthur Blvd., Suite 870  
Irving, TX 75038

### Risk Management

Arthur Gallagher  
7900 E. Union Ave., Suite 200  
Denver, CO 80237

### 401(k) Consultant

William M. Mercer, Inc.  
370 17th St., Suite 4000  
Denver, CO 80202

### 401(k) Recordkeeper

ADP  
1419 Lake Cook Rd.  
Deerfield, IL 60015





## **Financial Section**



# COLORADO PERA



*One figure represents the members and retirees—the reason Colorado PERA exists. Colorado PERA currently pays benefit recipients in excess of one billion dollars. And, many active members trust PERA with a portion of their salary to be invested for their future retirement. With Colorado PERA, their retirement security is guaranteed.*





Report of Independent Accountants

PricewaterhouseCoopers LLP  
Suite 1000  
1670 Broadway  
Denver CO 80202-4870  
Telephone (720) 931 7000  
Facsimile (720) 931 7100

To the Board of Trustees of the  
Public Employees' Retirement Association of Colorado:

In our opinion, the accompanying statement of fiduciary net assets and the related statement of changes in fiduciary net assets present fairly, in all material respects, the net assets held in trust for pension plan benefits and postemployment healthcare plan benefits of the State and School Division Trust Fund, Municipal Division Trust Fund, Judicial Division Trust Fund, the 401 (k) Voluntary Investment Program, the Health Care Trust Fund and the Insurance Dividend Reserve (Agency Fund) of the Public Employees' Retirement Association of Colorado ("PERA") at December 31, 2002, and the changes in net assets available for pension and postemployment healthcare benefits in the year then ended, in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of PERA's management; our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit of these statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion. The financial statements of PERA as of December 31, 2001 and for the year then ended were audited by other independent accountants whose report dated May 17, 2002 expressed an unqualified opinion on those statements.

The Management's Discussion and Analysis ("MD&A") on pages 17-21 and the required supplementary information on pages 35-39 are not a required part of the basic financial statements but are supplementary information required by the Governmental Accounting Standards Board ("GASB"). We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the MD&A and supplementary information. However, we did not audit and do not express an opinion on it.

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of administrative expenses, schedule of investment expenses, schedule of changes in assets and liabilities – Insurance Dividend Reserve (Agency Fund) and schedule of other deductions are presented for the purpose of additional analysis and are not a required part of the basic financial statements. These supplemental schedules are the responsibility of PERA's management. The supplemental schedules have been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

*PricewaterhouseCoopers LLP*

May 30, 2003

## Management's Discussion and Analysis

(In Thousands of Dollars)

Management is pleased to provide this overview and analysis of the financial activities of the Colorado Public Employees' Retirement Association (PERA) for the year ended December 31, 2002. We encourage readers to consider the information presented here in conjunction with additional information that we have furnished in the Letter of Transmittal beginning on page 3 of this CAFR.

PERA administers a total of six fiduciary funds, including three defined benefit pension trust funds: the State and School Division Trust Fund, the Municipal Division Trust Fund, and the Judicial Division Trust Fund (the Division Trust Funds). PERA also administers one defined contribution pension trust fund, the 401(k) Voluntary Investment Program; a healthcare plan, the Health Care Trust Fund; and one agency fund, the Insurance Dividend Reserve.

### Financial Highlights

- Plan net assets for all funds administered by PERA decreased \$3,607,025 during the calendar year 2002. The decrease was caused primarily by adverse investment returns in the equity markets.

State and School Division Trust Fund	(\$3,477,123)
Municipal Division Trust Fund	(178,904)
Judicial Division Trust Fund	(19,622)
401(k) Voluntary Investment Program	63,231
Health Care Trust Fund	5,393
<b>Total decrease in plan net assets</b>	<b><u>(\$3,607,025)</u></b>

- Investments for the three defined benefit plans, the Health Care Trust Fund and the Insurance Dividend Reserve are pooled. For the year ended December 31, 2002, the rate of return on the pooled investment assets was a negative 11.8 percent, which was greater than the negative 7.7 percent loss for the year ended December 31, 2001, and was the third consecutive year that investment returns under-performed the actuarial assumed rate of 8.75 percent. The under-performance of the equity markets for the current and prior year was the primary cause for the declines. The net investment loss for all of the funds administered by PERA for the year ended December 31, 2002, was \$3,414,851.

#### Net Investment Loss

State and School Division Trust Fund	(\$3,099,923)
Municipal Division Trust Fund	(196,652)
Judicial Division Trust Fund	(17,522)
401(k) Voluntary Investment Program	(83,012)
Health Care Trust Fund	(17,742)
<b>Total net investment loss</b>	<b><u>(\$3,414,851)</u></b>

The Board of Trustees of PERA (the Board) has the responsibility for the investment of PERA's funds with the following limitations: the aggregate amount of monies invested in corporate stocks and fixed income securities convertible into stock cannot exceed 65 percent of the then book value of the fund, no investment in common and/or preferred stock of any single corporation can exceed 5 percent of the then book value of the fund and the fund cannot acquire more than 12 percent of the outstanding stocks or bonds of any single corporation. As fiduciaries of the plans, the Board is responsible to carry out their investment functions solely in the interest of the PERA members and benefit recipients and for the exclusive purpose of providing benefits.

An Asset/Liability Study was undertaken in 2002 by the Board with the objective of determining the optimal strategic asset allocation policy to lower risk and ultimately allow PERA to meet its benefit obligations. In September of 2002, the Board approved a new asset allocation policy for the pooled investment assets of the three defined benefit plans, the Health Care Trust Fund and the Insurance Dividend Reserve. The previous and newly approved policy targets and newly approved policy ranges are:

	Previous Policy	New Policy	New Policy Ranges
Domestic Stocks	55%	45%	39%—51%
Domestic and International Fixed Income	10%	25%	20%—30%
International Stocks	17%	14%	11%—17%
Alternative Investments	8%	8%	3%—12%
Real Estate Equity and Debt	8%	7%	5%—10%
Timber	2%	1%	0%— 2%
Cash and Short-Term Investments	0%	0%	0%— 4%

In November 2002, the Board approved a timeline for the implementation of the Asset/Liability Study's targets and ranges. The Board approved a recommendation to increase the actual fixed income allocation of the portfolio to 20 percent by the end of January 2004, and have all asset classes within their target ranges by early 2005.

- As of December 31, 2002, PERA had commitments for future purchases in alternative investments of \$1,945,598, real estate of \$558,350, and timber of \$1,726.
- As of December 31, 2002, and 2001, the funding ratio (actuarial value of assets, using a four-year smoothed market value, divided by actuarial accrued liability) for each of the funds is shown below:

	2002	2001
State and School Division Trust Fund	87.9%	98.2%
Municipal Division Trust Fund	93.6%	104.3%
Judicial Division Trust Fund	98.3%	109.4%
Health Care Trust Fund	19.9%	17.7%

PERA's funding objective is to meet long-term benefit promises through contributions and investment income. The funding ratio listed above gives an indication of how well this objective has been met to date. The larger funding ratio indicates that a plan is better funded. As an example, for every dollar of the actuarially determined benefits due for the State and School Division Trust Fund, approximately \$0.88 of assets are available for payment.

The actuarial funding ratio for the three defined benefit plans was reduced because of investment losses, increased early retirements and an increase in the purchase of service credit, which created an actuarial loss to the plan. The Health Care Trust Fund's increased contribution rate, even with investment losses, improved the funding status of this fund.

## Management's Discussion and Analysis

(In Thousands of Dollars)

- As of December 31, 2002, the unfunded actuarial accrued liability (UAAL), and the amortization periods are shown below:

	UAAL	Amortization Period
State and School Division Trust Fund	\$3,912,311	Infinite
Municipal Division Trust Fund	\$126,511	Infinite
Judicial Division Trust Fund	\$2,771	13
Health Care Trust Fund	\$651,511	20

See Note 2 to the Required Supplementary Information on page 37.

The current contribution rates are not sufficient to support the current benefit structures of the State and School Division Trust Fund and the Municipal Division Trust Fund. Without significant recovery in the investment markets in the near future, the long-term ability of these Funds to support the benefits will be challenged in the absence of an increase in the contribution rates.

Using the Governmental Accounting Standards Board (GASB) Statement No. 25 as a guide, the State and School Division Trust Fund employer contribution rate would need to increase to 12.13 percent from 6.37 percent and the Municipal Division Trust Fund employer contribution rate would need to increase to 9.90 percent from 5.02 percent to amortize the UAAL over the 30-year period called for by GASB.

In 2002, the Board approved pursuing legislation in the 2003 session which would stabilize the contribution rates and allow for increases or decreases in the rates when certain funding thresholds are reached. For more detail on the legislation, which was vetoed in 2003, see Note 9 to the Financial Statements on page 34.

- In the Division Trust Funds the level of service purchases increased by \$234,726 as the membership saw the attractiveness of purchasing service in comparison to other investment opportunities. Purchasing service credit increases the amount of service PERA will use to determine a member's eligibility for retirement and to calculate the benefit. (Purchasing service credit for periods of noncovered employment does not affect the salary amount used in calculating the benefit.)

The cost to purchase one month of service credit is currently 15.5 percent of a member's Highest Average Salary (HAS) at the time of purchase. (The cost to purchase service for State Troopers and Colorado Bureau of Investigation (CBI) Agents is 20.4 percent of HAS and for judges the cost is 20 percent of HAS.) The Board voted at its November 2002 meeting to increase the rates for service credit purchases, effective November 1, 2003, as follows:

	Age at Purchase	
	Under Age 50	Age 50 and Over
State Troopers and CBI Agents State and School, and Municipal Divisions	22.85% of HAS	26.85% of HAS
Judicial Division	18.10% of HAS	22.10% of HAS
	21.75% of HAS	25.75% of HAS

- For the Health Care Trust Fund, employer contributions increased by \$18,238, primarily due to gainsharing legislation enacted in 2000. The gainsharing legislation specifies a formula in which any overfunding (based on the previous year's actuarial valuation) in the Division Trust Funds supports employer contribution reductions, which increases allocations to PERA's Health Care Trust Fund and matching ("MatchMaker") contributions to members' voluntary contributions to 401(k), 457, 403(b), and 401(a) tax-deferred retirement plans. The Board approved pursuing legislation in the 2003 legislation session, which would change the method of calculating when the gainsharing contributions would take effect. For more detail on the legislation, which was vetoed in 2003, see Note 9 to the Financial Statements on page 34.
- Total contributions for the 401(k) Voluntary Investment Program increased from \$223,038 in 2001 to \$247,364 in 2002. The increase of \$24,326 was caused by the employer match program, a \$10,172 increase in employer matches, and a 9.3 percent increase in the number of members participating. With the increase in membership and the number of investment funds, the administrative expenses for the 401(k) program increased by 11.6 percent, or from \$2,946 to \$3,289.

### Overview of the Financial Statements

The discussion and analysis is intended to serve as an introduction to PERA's financial statements. The financial section for PERA is comprised of four components: (1) fund financial statements, (2) notes to the financial statements, (3) required supplementary information, and (4) other supplementary schedules.

**Fund financial statements.** There are two financial statements presented for the fiduciary funds. The Statement of Fiduciary Net Assets as of December 31, 2002, indicates the net assets available to pay future payments and gives a snapshot at a particular point in time. The Statement of Changes in Fiduciary Net Assets for the year ended December 31, 2002, provides a view of the current year's additions and deductions to the funds.

**Notes to the financial statements.** The notes provide additional information that is essential for a full understanding of the data provided in the fund financial statements. The notes to the financial statements can be found on pages 26–35 of this CAFR.

**Required supplementary information.** The required supplementary information consists of a Schedule of Funding Progress and a Schedule of Employer Contributions and related notes concerning the funding status for the defined benefit pension trust funds and the healthcare fund. These schedules provide historical trend information, which contributes to understanding the changes in the funded status of the funds over time.

**Other supplementary schedules.** The additional schedules (Schedule of Administrative Expenses, Schedule of Investment Expenses, Statement of Changes in Assets and Liabilities-Insurance Dividend Reserve, and Schedule of Other Deductions) are presented for the purpose of additional analysis.

## Management's Discussion and Analysis

(In Thousands of Dollars)

### Comparative Financial Statements

**Defined Benefit Pension Trust Funds.** The three defined benefit funds provide retirement, survivor and disability benefits to the employees of affiliated State, School, Municipal and Judicial employers. Benefits are funded by member and employer contributions and by earnings on investments.

#### Defined Benefit Pension Trust Funds Fiduciary Net Assets

	December 31, 2002	December 31, 2001	% Change
<b>Assets</b>			
Cash and short-term investments	\$623,794	\$618,234	0.9%
Securities lending collateral	2,256,963	2,433,428	(7.3)%
Receivables	215,924	217,890	(0.9)%
Investments, at fair value	22,826,619	26,468,660	(13.8)%
Capital assets, net of accumulated depreciation	21,263	21,469	(1.0)%
<b>Total assets</b>	<b>25,944,563</b>	<b>29,759,681</b>	<b>(12.8)%</b>
<b>Liabilities</b>			
Security lending obligations	2,256,963	2,433,428	(7.3)%
Investment settlements, interfund, and other	115,266	78,270	47.3%
<b>Total liabilities</b>	<b>2,372,229</b>	<b>2,511,698</b>	<b>(5.6)%</b>
<b>Net assets available for benefits</b>	<b>\$23,572,334</b>	<b>\$27,247,983</b>	<b>(13.5)%</b>

#### Defined Benefit Pension Trust Funds Changes in Fiduciary Net Assets

	December 31, 2002	December 31, 2001	% Change
<b>Additions</b>			
Employer contributions	\$338,180	\$340,721	(0.7)%
Member contributions	434,499	403,225	7.8%
Purchased service	362,109	127,383	184.3%
Investment income (loss)	(3,314,097)	(2,441,617)	35.7%
<b>Total additions</b>	<b>(2,179,309)</b>	<b>(1,570,288)</b>	<b>38.8%</b>
<b>Deductions</b>			
Benefit payments	1,372,218	1,228,730	11.7%
Refunds	99,302	101,825	(2.5)%
Disability insurance premiums	4,450	3,527	26.2%
Administrative expenses	19,311	17,819	8.4%
Other deductions/(additions)	1,059	969	9.3%
<b>Total deductions</b>	<b>1,496,340</b>	<b>1,352,870</b>	<b>10.6%</b>
<b>Changes in net assets available for benefits</b>	<b>(\$3,675,649)</b>	<b>(\$2,923,158)</b>	<b>25.7%</b>

## Financial Section

### Management's Discussion and Analysis

(In Thousands of Dollars)

**Defined Contribution Pension Trust Fund.** The 401(k) Voluntary Investment Program provides retirement benefits to members of the Defined Benefit Pension Trust Funds who have voluntarily made contributions during their employment.

#### 401(k) Voluntary Investment Program Fiduciary Net Assets

	December 31, 2002	December 31, 2001	% Change
<b>Assets</b>			
Cash and short-term investments	\$76,676	\$73,598	4.2%
Receivables	33,636	31,954	5.3%
Investments, at fair value	639,245	578,384	10.5%
<b>Total assets</b>	<b>749,557</b>	<b>683,936</b>	<b>9.6%</b>
<b>Liabilities</b>			
Investment settlements, interfund, and other	11,708	9,318	25.6%
<b>Total liabilities</b>	<b>11,708</b>	<b>9,318</b>	<b>25.6%</b>
<b>Net assets available for benefits</b>	<b>\$737,849</b>	<b>\$674,618</b>	<b>9.4%</b>

#### 401(k) Voluntary Investment Program Changes in Fiduciary Net Assets

	December 31, 2002	December 31, 2001	% Change
<b>Additions</b>			
Employer contributions	\$68,209	\$58,037	17.5%
Member contributions	179,155	165,001	8.6%
Investment income (loss)	(83,012)	(52,070)	59.4%
<b>Total additions</b>	<b>164,352</b>	<b>170,968</b>	<b>(3.9)%</b>
<b>Deductions</b>			
Refunds	99,838	52,909	88.7%
Administrative expenses	3,289	2,946	11.6%
Other deductions/(additions)	(2,006)	(1,835)	9.3%
<b>Total deductions</b>	<b>101,121</b>	<b>54,020</b>	<b>87.2%</b>
<b>Changes in net assets available for benefits</b>	<b>\$63,231</b>	<b>\$116,948</b>	<b>(45.9)%</b>

## Management's Discussion and Analysis

(In Thousands of Dollars)

**Healthcare Fund.** The Health Care Trust Fund provides a health care premium subsidy to participating PERA benefit recipients and their eligible beneficiaries who choose to enroll in the Program. The Health Care Trust Fund is funded by amounts contributed by employers during an employee's working life based on a percentage of pay.

### Health Care Trust Fund Fiduciary Net Assets

	December 31, 2002	December 31, 2001	% Change
<b>Assets</b>			
Cash and short-term investments	\$3,746	\$3,051	23.4%
Securities lending collateral	13,555	12,009	12.9%
Receivables	14,010	11,245	24.6%
Investments, at fair value	137,093	130,630	4.9%
<b>Total assets</b>	<b>168,404</b>	<b>156,935</b>	<b>7.3%</b>
<b>Liabilities</b>			
Security lending obligations	13,555	12,009	12.9%
Investment settlements, interfund, and other	23,593	19,063	23.8%
<b>Total liabilities</b>	<b>37,148</b>	<b>31,072</b>	<b>19.6%</b>
<b>Net assets available for benefits</b>	<b>\$131,256</b>	<b>\$125,863</b>	<b>4.3%</b>

### Health Care Trust Fund Changes in Fiduciary Net Assets

	December 31, 2002	December 31, 2001	% Change
<b>Additions</b>			
Employer contributions	\$92,562	\$74,324	24.5%
Retiree health care premium payments	48,825	43,960	11.1%
Investment income (loss)	(17,742)	(10,818)	64.0%
<b>Total additions</b>	<b>123,645</b>	<b>107,466</b>	<b>15.1%</b>
<b>Deductions</b>			
Benefit payments	118,470	103,472	14.5%
Administrative expenses	838	679	23.4%
Other deductions/(additions)	(1,056)	(368)	187.0%
<b>Total deductions</b>	<b>118,252</b>	<b>103,783</b>	<b>13.9%</b>
<b>Changes in net assets available for benefits</b>	<b>\$5,393</b>	<b>\$3,683</b>	<b>46.4%</b>

## Financial Section

### Statement of Fiduciary Net Assets

As of December 31, 2002, with Comparative Totals for 2001  
(In Thousands of Dollars)

	State and School Division Trust Fund	Municipal Division Trust Fund	Judicial Division Trust Fund	Total Defined Benefit Plans
<b>Assets</b>				
<b>Cash and short-term investments</b>				
Cash and short-term investments	\$582,796	\$37,681	\$3,317	\$623,794
Securities lending collateral	2,108,628	136,336	11,999	2,256,963
<b>Total cash and short-term investments</b>	<b>2,691,424</b>	<b>174,017</b>	<b>15,316</b>	<b>2,880,757</b>
<b>Receivables</b>				
Benefit	99,405	5,959	913	106,277
Interfund	0	0	0	0
Investment settlements and income	102,441	6,623	583	109,647
<b>Total receivables</b>	<b>201,846</b>	<b>12,582</b>	<b>1,496</b>	<b>215,924</b>
<b>Investments, at fair value:</b>				
U.S. government obligations	1,439,820	93,093	8,193	1,541,106
Domestic corporate bonds	719,241	46,503	4,093	769,837
Domestic stocks	10,477,250	677,420	59,620	11,214,290
International stocks	2,886,137	186,607	16,423	3,089,167
International fixed income	655,169	42,361	3,728	701,258
Real estate equity	2,189,603	141,572	12,460	2,343,635
Real estate debt	269,938	17,453	1,536	288,927
Alternative investments	2,429,714	157,096	13,826	2,600,636
Timber investments	259,507	16,779	1,477	277,763
<b>Total investments, at fair value</b>	<b>21,326,379</b>	<b>1,378,884</b>	<b>121,356</b>	<b>22,826,619</b>
<b>Capital assets, at cost, net of accumulated depreciation of \$17,781 and \$15,537 at December 31, 2002, and 2001, respectively</b>				
	19,668	1,562	33	21,263
<b>Total assets</b>	<b>24,239,317</b>	<b>1,567,045</b>	<b>138,201</b>	<b>25,944,563</b>
<b>Liabilities</b>				
Investment settlements and other liabilities	101,038	6,925	520	108,483
Security lending obligations	2,108,628	136,336	11,999	2,256,963
Interfund	5,870	836	77	6,783
<b>Total liabilities</b>	<b>2,215,536</b>	<b>144,097</b>	<b>12,596</b>	<b>2,372,229</b>
<b>Commitments and contingencies (Note 6)</b>				
<b>Net assets held in trust for pension plan benefits and postemployment healthcare plan benefits</b>				
	<b>\$22,023,781</b>	<b>\$1,422,948</b>	<b>\$125,605</b>	<b>\$23,572,334</b>
<b>Net assets held in trust for:</b>				
Defined contribution pension plan benefits	\$0	\$0	\$0	\$0
Postemployment healthcare plan benefits <sup>1</sup>	0	0	0	0
Defined benefit pension plan benefits <sup>1</sup>	22,023,781	1,422,948	125,605	23,572,334
<b>Net assets held in trust for pension plan benefits and postemployment healthcare plan benefits</b>	<b>\$22,023,781</b>	<b>\$1,422,948</b>	<b>\$125,605</b>	<b>\$23,572,334</b>

<sup>1</sup> (A schedule of funding progress is presented for each plan on page 35.)

The accompanying notes are an integral part of these financial statements.

**Statement of Fiduciary Net Assets**

As of December 31, 2002, with Comparative Totals for 2001  
(In Thousands of Dollars)

401(k) Voluntary Investment Program	Total Pension Trust Funds	Health Care Trust Fund	Insurance Dividend Reserve (Agency Fund)	Totals 2002	Totals 2001
\$76,676	\$700,470	\$3,746	\$350	\$704,566	\$695,282
0	2,256,963	13,555	1,266	2,271,784	2,447,007
76,676	2,957,433	17,301	1,616	2,976,350	3,142,289
32,655	138,932	5,523	0	144,455	124,883
0	0	7,828	0	7,828	6,529
981	110,628	659	61	111,348	130,344
33,636	249,560	14,010	61	263,631	261,756
0	1,541,106	9,256	864	1,551,226	1,276,672
164,513	934,350	4,624	432	939,406	960,789
450,439	11,664,729	67,351	6,289	11,738,369	14,825,759
24,293	3,113,460	18,553	1,732	3,133,745	3,591,321
0	701,258	4,212	393	705,863	684,314
0	2,343,635	14,075	1,314	2,359,024	2,462,941
0	288,927	1,735	163	290,825	235,260
0	2,600,636	15,619	1,458	2,617,713	2,904,536
0	277,763	1,668	156	279,587	253,155
639,245	23,465,864	137,093	12,801	23,615,758	27,194,747
0	21,263	0	0	21,263	21,469
749,557	26,694,120	168,404	14,478	26,877,002	30,620,261
10,663	119,146	23,593	13,212	155,951	118,261
0	2,256,963	13,555	1,266	2,271,784	2,447,007
1,045	7,828	0	0	7,828	6,529
11,708	2,383,937	37,148	14,478	2,435,563	2,571,797
<b>\$737,849</b>	<b>\$24,310,183</b>	<b>\$131,256</b>	<b>\$0</b>	<b>\$24,441,439</b>	<b>\$28,048,464</b>
\$737,849	\$737,849	\$0	\$0	\$737,849	\$674,618
0	0	131,256	0	131,256	125,863
0	23,572,334	0	0	23,572,334	27,247,983
<b>\$737,849</b>	<b>\$24,310,183</b>	<b>\$131,256</b>	<b>\$0</b>	<b>\$24,441,439</b>	<b>\$28,048,464</b>

## Financial Section

### Statement of Changes in Fiduciary Net Assets

For the Year Ended December 31, 2002, with Comparative Combined Totals for 2001

(In Thousands of Dollars)

	State and School Division Trust Fund	Municipal Division Trust Fund	Judicial Division Trust Fund	Total Defined Benefit Plans
<b>Additions</b>				
<b>Contributions</b>				
Employers	\$315,825	\$21,972	\$383	\$338,180
Members	397,315	35,202	1,982	434,499
Purchased service	329,572	30,609	1,928	362,109
Retiree health care premiums	0	0	0	0
<b>Total contributions</b>	<b>1,042,712</b>	<b>87,783</b>	<b>4,293</b>	<b>1,134,788</b>
<b>Investment income (loss)</b>				
Net depreciation in fair value of investments	(3,625,844)	(231,000)	(20,506)	(3,877,350)
Interest	233,985	15,281	1,327	250,593
Dividends	240,265	15,691	1,363	257,319
Real estate net operating income	119,580	7,810	678	128,068
Less investment expense	(77,262)	(5,045)	(438)	(82,745)
<b>Net income (loss) from investing activities</b>	<b>(3,109,276)</b>	<b>(197,263)</b>	<b>(17,576)</b>	<b>(3,324,115)</b>
Securities lending income	45,402	2,965	258	48,625
Less securities lending borrower rebates	(33,009)	(2,155)	(187)	(35,351)
Less securities lending agent fees	(3,040)	(199)	(17)	(3,256)
<b>Net income from securities lending</b>	<b>9,353</b>	<b>611</b>	<b>54</b>	<b>10,018</b>
<b>Net investment income (loss)</b>	<b>(3,099,923)</b>	<b>(196,652)</b>	<b>(17,522)</b>	<b>(3,314,097)</b>
<b>Total additions</b>	<b>(2,057,211)</b>	<b>(108,869)</b>	<b>(13,229)</b>	<b>(2,179,309)</b>
<b>Deductions</b>				
<b>Benefits</b>				
Benefits paid to retirees/cobeneficiaries	1,287,783	56,170	6,406	1,350,359
Benefits paid to survivors	19,869	1,665	325	21,859
Benefits paid to health care participants	0	0	0	0
<b>Total benefits</b>	<b>1,307,652</b>	<b>57,835</b>	<b>6,731</b>	<b>1,372,218</b>
Refunds of contribution accounts, including match and interest	88,793	10,426	83	99,302
Disability and life insurance premiums	4,070	360	20	4,450
Administrative expenses	17,752	1,539	20	19,311
Other deductions/(additions)	1,645	(125)	(461)	1,059
<b>Total deductions</b>	<b>1,419,912</b>	<b>70,035</b>	<b>6,393</b>	<b>1,496,340</b>
<b>Net increase (decrease) in assets available</b>	<b>(3,477,123)</b>	<b>(178,904)</b>	<b>(19,622)</b>	<b>(3,675,649)</b>
<b>Net assets available for pension and postemployment healthcare benefits</b>				
<b>Beginning of year</b>	<b>25,500,904</b>	<b>1,601,852</b>	<b>145,227</b>	<b>27,247,983</b>
<b>End of year</b>	<b>\$22,023,781</b>	<b>\$1,422,948</b>	<b>\$125,605</b>	<b>\$23,572,334</b>

The accompanying notes are an integral part of these financial statements.

**Statement of Changes in Fiduciary Net Assets**

For the Year Ended December 31, 2002, with Comparative Combined Totals for 2001

(In Thousands of Dollars)

401(k) Voluntary Investment Program	Total Pension Trust Funds	Health Care Trust Fund	Combined Totals	
			2002	2001
\$68,209	\$406,389	\$92,562	\$498,951	\$473,082
179,155	613,654	0	613,654	568,226
0	362,109	0	362,109	127,383
0	0	48,825	48,825	43,960
247,364	1,382,152	141,387	1,523,539	1,212,651
(97,609)	(3,974,959)	(21,476)	(3,996,435)	(3,080,650)
6,182	256,775	1,662	258,437	245,789
8,328	265,647	1,706	267,353	259,303
0	128,068	849	128,917	141,208
0	(82,745)	(549)	(83,294)	(80,489)
(83,099)	(3,407,214)	(17,808)	(3,425,022)	(2,514,839)
541	49,166	322	49,488	108,033
(425)	(35,776)	(234)	(36,010)	(94,389)
(29)	(3,285)	(22)	(3,307)	(3,310)
87	10,105	66	10,171	10,334
(83,012)	(3,397,109)	(17,742)	(3,414,851)	(2,504,505)
164,352	(2,014,957)	123,645	(1,891,312)	(1,291,854)
0	1,350,359	0	1,350,359	1,208,022
0	21,859	0	21,859	20,708
0	0	118,470	118,470	103,472
0	1,372,218	118,470	1,490,688	1,332,202
99,838	199,140	0	199,140	154,734
0	4,450	0	4,450	3,527
3,289	22,600	838	23,438	21,444
(2,006)	(947)	(1,056)	(2,003)	(1,234)
101,121	1,597,461	118,252	1,715,713	1,510,673
63,231	(3,612,418)	5,393	(3,607,025)	(2,802,527)
674,618	27,922,601	125,863	28,048,464	30,850,991
<b>\$737,849</b>	<b>\$24,310,183</b>	<b>\$131,256</b>	<b>\$24,441,439</b>	<b>\$28,048,464</b>

## Financial Section

### Notes to the Financial Statements

(In Thousands of Dollars)

#### NOTE 1—PLAN DESCRIPTION

##### Organization

The Public Employees' Retirement Association of Colorado (PERA) was established in 1931; the statute relating to PERA is Title 24, Article 51 of the Colorado Revised Statutes (C.R.S.). PERA administers cost-sharing multiple-employer defined benefit plans for the State and School Division Trust Fund, Municipal Division Trust Fund, and Judicial Division Trust Fund (Division Trust Funds). PERA also administers a cost-sharing multiple-employer defined benefit healthcare plan (Health Care Trust Fund, see Note 8), an agency fund (Insurance Dividend Reserve), and a multiple-employer Internal Revenue Code (IRC) Section 401(k) defined contribution plan (Voluntary Investment Program, see Note 7). The purpose of the Division Trust Funds is to provide benefits to members at retirement or disability, or to their beneficiaries in the event of death. Members of PERA are employed by public employers (most of whom do not participate under Social Security) located in the state of Colorado and affiliated with PERA.

Responsibility for the organization and administration of the Division Trust Funds, Health Care Trust Fund (HCTF), Voluntary Investment

Program, and Insurance Dividend Reserve is placed with the Board of Trustees (the Board) of PERA. The State Division Trust Fund was established in 1931, the School and Municipal Division Trust Funds in 1944, and the Judicial Division Trust Fund in 1949. The State and School Division Trust Funds were combined in 1997.

The number of affiliated employers for the three Divisions is as follows:

	As of December 31	
	2002	2001
State and School	269	272
Municipal	118	107
Judicial	6	6
<b>Total employers</b>	<b>393</b>	<b>385</b>

##### Membership

###### Division Trust Funds-Defined Benefit Pension Plans

Benefit recipients and members of PERA consisted of the following as of December 31, 2002, and with comparative combined totals for 2001:

	State and School	Municipal	Judicial	Totals	
				2002	2001
Retirees and beneficiaries currently receiving benefits	57,384	2,941	223	60,548	57,860
Terminated members entitled to benefits, but not yet receiving them	10,148	757	16	10,921	10,351
Non-vested inactive members	80,646	8,354	2	89,002	83,528
Active members:					
Vested					
General employees	78,284	5,694	211	84,189	82,276
State troopers	535	0	0	535	506
Non-vested					
General employees	80,932	6,815	61	87,808	86,788
State troopers	229	0	0	229	263
Total active members	159,980	12,509	272	172,761	169,833
<b>Totals</b>	<b>308,158</b>	<b>24,561</b>	<b>513</b>	<b>333,232</b>	<b>321,572</b>

###### Voluntary Investment Program

See Note 7.

###### Health Care Trust Fund

See Note 8.

## Notes to the Financial Statements

(In Thousands of Dollars)

### Benefit Provisions

#### Division Trust Funds-Defined Benefit Pension Plans

Benefit provisions for the defined benefit pension plans are established by and may be amended by state statute. Title 24, Article 51 of the C.R.S. assigns the authority to establish and amend the benefit provisions of the plans to the state Legislature. Members with five or more years of service automatically receive the higher of the defined benefit retirement benefit or money purchase benefit at retirement. Members are eligible to receive a monthly retirement benefit when they reach age 65 or meet the age and service requirements listed below. Members elect to receive their benefits in the form of single or joint-life monthly payments.

#### Service Retirement Benefits

Minimum Service Credit	Minimum Age
30 Years	50
Age and Service = 80 years or more	55
5 Years	65
Less than 5 years with 60 months on payroll	65

#### Reduced Service Retirement Benefits

Minimum Service Credit	Minimum Age
25 Years	50
20 Years	55
5 Years	60

Service retirement benefits are based on the member's years of service, age, and Highest Average Salary (HAS). Members who meet the eligibility for service retirement receive monthly defined retirement benefits equal to 2.5 percent of their HAS for each year of service credit. The benefit shall not exceed 100 percent of salary, nor shall it exceed the maximum amount allowed by federal law. Reduced service retirement benefits are decreased for each month prior to the member's first eligible service retirement date.

HAS is calculated as one-twelfth of the average of the highest annual salaries on which PERA contributions were paid that are associated with three periods of 12 consecutive months of service credit. A 15 percent annual limit in salary increases applies if any salary used in the HAS calculation is from the three years prior to retirement. The three 12-month periods do not have to be consecutive nor do they have to be the last three years of employment. In calculating the HAS for members in the Judicial Division Trust Fund, only one period of 12 consecutive months of service credit is used.

A money purchase benefit is determined by the member's life expectancy and the value of the member's contribution account plus a matching amount as of the date of retirement. The matching amount is 100 percent of the member's contributions and accrued interest at the time of retirement. For members who have less than five years of service, a money purchase benefit is payable beginning at age 65.

The reduction factor used to calculate PERA benefits for reduced service retirement is 3 percent per year (0.25 percent per month) for members retiring from age 55 through age 59, with 20 through 29 years of service, and 4 percent per year (0.333 percent per month) on benefits paid to members retiring at ages 60 through 64 with 5 years of service. Members receive no reduction in their retirement benefit if their total years of age

plus service equals 80 years or more, if they are at least 55 years old and have at least five years of service credit.

PERA provides a two-tier Disability Program. This Program requires that members have five or more years of earned service credit, with at least six months of this credit earned since the most recent period of membership. Disability retirement benefits are provided to members who are totally and permanently mentally or physically incapacitated from regular and substantial gainful employment. The amount of the disability retirement benefit is based on the member's HAS and earned, purchased, and in some circumstances, projected service credit. Short-term disability payments are provided to members who are mentally or physically incapacitated from performance of essential job duties after reasonable accommodation, but who are not totally and permanently incapacitated from regular and substantial gainful employment. PERA provides reasonable income replacement and rehabilitation or retraining services. The maximum period for short-term disability payments is 22 months, and the maximum income replacement is 60 percent of the member's pre-disability PERA-includable salary as defined in C.R.S. § 24-51-101(42).

Monthly benefits paid to qualified survivors of members are based on the defined benefit formula; however, a surviving spouse may be eligible to receive the higher of the money purchase benefit or the defined benefit formula. The minimum monthly benefit, based on the defined benefit formula, that is paid to an eligible surviving spouse equals 25 percent of HAS.

If a member dies with less than one year of PERA service credit or with no survivors qualified to receive a monthly benefit, the named beneficiary or the estate receives a lump-sum payment of the member's contribution account, in addition to a matching amount equal to 100 percent of the member's contributions and interest.

Retirement and survivor benefits are increased 3.5 percent, compounded annually, each March. The first annual increase occurs in the March that immediately follows the calendar year in which the member retired. If the member has not been retired for a full year, the benefit is increased proportionately.

Retirement benefits for State Troopers and members of the Judicial Division differ slightly as defined in C.R.S. § 24-51-602 and 24-51-603.

Members who withdraw their accounts before reaching age 65 or meeting the age and service requirements for retirement eligibility receive a refund that includes their member contributions and accrued interest, and a matching amount equal to 50 percent of the member's contributions and accrued interest. Members who withdraw their accounts upon or after reaching age 65 or retirement eligibility receive a 100 percent matching amount of the member's contributions and accrued interest.

Interest credited to member contribution accounts is set at 80 percent of PERA's actuarial investment assumption rate. For 2002, the actuarial investment assumption rate was 8.75 percent and the member interest rate was 80 percent of that, or 7 percent.

Members who previously received refunds of their contributions may reinstate this service credit through lump-sum or installment payments once they have one year of service credit. Also, any PERA member can accelerate vesting by purchasing service credit through lump-sum or

### Notes to the Financial Statements

(In Thousands of Dollars)

installment payments for paid sabbatical leaves and certain periods of non-vested private or public sector employment not covered by PERA.

In the 2002 calendar year, the PERA “MatchMaker” program provided an employer match on members’ voluntary contributions to tax-deferred defined contribution (DC) plans. The MatchMaker program, which was initiated by the Board and authorized in Senate Bill 99-90, is contingent on any overfunding in the PERA retirement trust funds. The legislation allows PERA to direct PERA-affiliated employers to reduce a portion of their employer contributions normally sent to PERA to match members’ voluntary contributions to 401(k), 457, 403(b), and 401(a) tax-deferred retirement plans. The amount of the maximum contribution match may change from year-to-year, and if PERA is not fully funded, matching dollars may not be paid.

The match set by the Board for the 2002 calendar year was a 100 percent match of members’ voluntary contributions to eligible DC plans, up to a maximum of 3 percent of PERA-includable salary for State and School Division members, 3 percent of PERA-includable salary for Municipal Division members, and 7 percent of PERA-includable salary for Judicial Division members as defined in C.R.S. § 24-51-101.

#### Voluntary Investment Program

See Note 7.

#### Health Care Trust Fund

See Note 8.

### Pension Plan Disclosure Statements for PERA Employees

All employees of PERA, an affiliated employer, are members of the State and School Division Trust Fund and earn and accrue benefits as would any other member as described above. As an affiliated employer of the State and School Division Trust Fund, PERA also contributes to the Health Care Trust Fund (see Note 8) and employees are able to voluntarily participate in the Voluntary Investment Program (see Note 7).

PERA’s contributions to the State and School Division Trust Fund for the years ending December 31, 2002, 2001, and 2000 were \$728, \$699, and \$1,025, respectively, equal to its required contributions for each year. PERA’s contributions to the Health Care Trust Fund for the years ending December 31, 2002, 2001, and 2000 were \$216, \$169, and \$115, respectively, equal to its required contributions for each year. The 401(k) Plan member contributions from PERA for the year ended December 31, 2002, 2001, and 2000 were \$1,006, \$845, and \$754, respectively. The PERA MatchMaker contributions to the 401(k) Plan for the year ended December 31, 2002, 2001, and 2000 were \$372, \$340, and \$0, respectively. In addition to the MatchMaker, PERA also provides its employees with an employer match to their contributions to the 401(k) Plan totaling for the year ended December 31, 2002, 2001, and 2000 were \$239, \$217, and \$179, respectively.

### Insurance Dividend Reserve

The Insurance Dividend Reserve (IDR) is an accumulation of dividends received from an insurance company as a return on the premiums paid by those members who have voluntarily enrolled in life insurance programs, adjusted for actual historical experience. The proceeds from IDR received

are used to provide increased life insurance benefits to active and retired members without increasing premiums to them.

### Termination of Colorado PERA

If PERA is partially or fully terminated for any reason, state law provides that the rights of all members and benefit recipients to all benefits on the date of termination, to the extent then funded, will become nonforfeitable.

## NOTE 2—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Reporting Entity

The Board oversees all funds included in the financial statements of PERA and has the ability to influence operations. The Board’s responsibilities include designation of management, membership eligibility, investment of funds, and accountability for fiscal matters.

PERA is an instrumentality of the state; it is not an agency of state government. Also, it is not subject to administrative direction by any department, commission, board, bureau, or agency of the state. Accordingly, PERA’s financial statements are not included in the financial statements of any other organization.

### GASB Statement No. 34

In June 1999 the Governmental Accounting Standards Board (GASB) issued Statement No. 34, *Basic Financial Statements—Management’s Discussion and Analysis—for State and Local Governments* (GASB 34) and in June 2001 issued Statement No. 37, *Basic Financial Statements—and Management’s Discussion and Analysis—for State and Local Governments: Omnibus*, which amended certain provisions of GASB 34. Although not required to implement GASB 34 until calendar year 2003, PERA elected to early adopt the new pronouncement, as amended, for the year ended December 31, 2001. GASB 34 had no monetary impact on the financial statements of PERA, but does require additional disclosure. As a result of the adoption of GASB 34, the Management’s Discussion and Analysis has been included as required supplementary information and precedes the financial statements.

### Basis of Presentation

The accompanying financial statements are prepared in accordance with Governmental Accounting Standards Board (GASB) Statements numbers 25, 26, 34, and 37, as well as generally accepted accounting principles that apply to governmental accounting for fiduciary funds.

### Basis of Accounting

The accompanying financial statements for the pension trust funds and the healthcare plan are prepared using the economic resources measurement focus and the accrual basis of accounting. Member and employer contributions are recognized as revenues in the period in which the employer pays compensation to the member. Benefits and refunds are recognized when due and payable.

An agency fund is custodial in nature and does not measure the results of operations. Assets and liabilities are recorded using the accrual basis of accounting.

## Notes to the Financial Statements

(In Thousands of Dollars)

### Fund Accounting

The financial activities of the State and School Division Trust Fund, the Municipal Division Trust Fund, the Judicial Division Trust Fund, the HCTF, the IDR, and the Voluntary Investment Program are recorded in separate funds. The State and School, Municipal, and Judicial Divisions maintain separate accounts, and all actuarial determinations are made using separate Division-based information.

The Division Trust Funds, the HCTF, and the IDR pool their investments into a combined investment portfolio. Investment value and earnings of the investment pool are allocated among the funds based on each fund's percentage ownership. As of December 31, 2002, and 2001, the ownership percentages of each fund were as follows:

	Ownership Percentage as of December 31	
	2002	2001
State and School	92.82%	93.08%
Municipal	6.00	5.84
Judicial	0.53	0.53
HCTF	0.60	0.49
IDR	0.05	0.06
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>

The administrative activities and operating assets and liabilities are pooled and recorded in a common operating fund. Expenses incurred and net operating assets are allocated from the common operating fund to the Division Trust Funds based on the ratio of the number of members and benefit recipients at the beginning of the year in each Division to the total for all the Division Trust Funds. Expenses are allocated to the HCTF and the Voluntary Investment Program based on estimated time and resources devoted to these Funds.

### Fair Value of Investments

Plan investments are presented at fair value. Securities traded on a national or international exchange are valued at the last reported sales price. Corporate bonds not traded on a national or international exchange are based on equivalent values of comparable securities with similar yield and risk. Real estate debt is valued on the basis of future principal and interest payments, and is discounted at prevailing interest rates for similar instruments. The fair value of real estate and timber investments are based on periodic independent appraisals. Other investments that do not have an established market (including venture capital, leveraged buyout funds, and international private equity funds within the alternative investment category; see Note 4) are recorded at estimated fair value. Short-term investments are carried at cost, which approximates fair value.

### Property and Equipment

Property and equipment are carried at cost, less accumulated depreciation. Costs of major additions and improvements are capitalized. Expenditures for maintenance and repairs are charged to operations as incurred. Depreciation is calculated using the straight-line method, with estimated lives ranging from three to forty years in the following major classes: vehicles, five years; computer and office equipment, three years to five years; office furniture and leasehold improvements, ten years; and building and building additions, forty years.

### NOTE 3—CONTRIBUTIONS

#### Division Trust Funds-Defined Benefit Pension Plans

Members and employers are required to contribute to PERA at a rate set by statute. The contribution requirements of plan members and affiliated employers are established under C.R.S. §§ 24-51-401 *et. seq.*

Members are required to contribute 8 percent of their gross salary to PERA, except for State Troopers and Colorado Bureau of Investigation officers, who contribute 10 percent. These contributions are placed in individual member accounts. Member contributions are tax-deferred for federal and state income tax purposes, effective July 1, 1984, and January 1, 1987, respectively. Prior to those dates, contributions were made on an after-tax basis.

PERA-affiliated employers also contribute a percentage of payroll. The contribution rates for the combined retirement benefits and health care benefits from January 1, 2002, through December 31, 2002, were as follows:

#### Employer Contributions as a Percent of Members' Salaries January 1, 2002, through June 30, 2002

Division	Membership	Contributions
State and School	All members (except State Troopers)	9.9%
State and School	State Troopers	12.6%
Municipal	All members	9.19%
Judicial	All members	11.82%

#### Employer Contributions as a Percent of Members' Salaries July 1, 2002, through December 31, 2002

Division	Membership	Contributions
State and School	All members (except State Troopers)	10.04%
State and School	State Troopers	12.74%
Municipal	All members	9.19%
Judicial	All members	11.82%

PERA-affiliated employers forward the contributions to PERA after any employer matches as defined by the PERA MatchMaker Program have been deducted. These contributions are deposited, less the portion of contributions for health care benefits, which are transferred to the HCTF, in a trust fund established for each Division for the purpose of creating actuarial reserves for future benefits.

#### Voluntary Investment Program

See Note 7.

#### Health Care Trust Fund

See Note 8.

## Notes to the Financial Statements

(In Thousands of Dollars)

### NOTE 4—INVESTMENTS

#### Investment Authority

Under C.R.S. § 24-51-206, the Board has responsibility for the investment of PERA's funds, with the following investment limitations:

- The aggregate amount of monies invested in corporate stocks or corporate bonds, notes, or debentures that are convertible into stock or in investment trust shares cannot exceed 65 percent of the then book value of the fund.
- No investment of the fund in common or preferred stock (or both) of any single corporation can exceed 5 percent of the then book value of the fund.
- The fund cannot acquire more than 12 percent of the outstanding stocks or bonds of any single corporation.

The above limitations and the fund's diversification over several asset classes are intended to reduce the overall investment risk exposure.

#### Investment Concentrations

No investments (other than those issued or guaranteed by the U.S. government) represent 5 or more percent of the Division Trust Funds, Health Care Trust Fund, and Insurance Dividend Reserve net assets. The Voluntary Investment Program investment concentrations are found in Note 7.

#### Cash

The table below presents the PERA combined total deposits and money market funds as of December 31, 2002.

The differences between carrying values and bank balances are due to outstanding checks and deposits not yet processed by the bank.

The carrying value of cash and short-term investments at December 31, 2002, on the Statement of Fiduciary Net Assets includes short-term fixed income of \$110,091 and deposit and money market funds of \$594,475 for a total of \$704,566. PERA considers fixed income and real estate debt investments purchased with a maturity of 12 months or less to be short-term investments.

	<u>Carrying Value</u>	<u>Bank Balance</u>
Deposits with banks <i>(fully insured by federal depository insurance)</i>	(\$14,474)	\$20,359
Deposits held at bank <i>(fully collateralized by underlying securities, held by PERA's agent in PERA's name)</i>	24,185	24,186
Money market funds held at bank <i>(fully collateralized by underlying securities, held by PERA's agent in PERA's name)</i>	584,764	584,765
<b>Total deposits and money market funds</b>	<b><u>\$594,475</u></b>	<b><u>\$629,310</u></b>

#### Other Investments

The table below presents the combined PERA total investments held at December 31, 2002, categorized to give an indication of the level of risk assumed by PERA. The categories are:

1. Insured or registered securities, which are held by PERA or its agent in PERA's name.
2. Uninsured and unregistered, collateralized with securities held by the counterparty's trust department or agent in PERA's name.
3. Uncollateralized.

Investments not evidenced by securities are not categorized.

Short-term U.S. government obligations of \$17,651, short-term domestic fixed income of \$9,583 and short-term international fixed-income of \$82,857 are included in the total investment amount shown in this disclosure while being included in cash and short-term investments in the financial statements, due to their maturity being less than 12 months.

<b>Investments—Category 1 (held by PERA's agent in PERA's name)</b>	<b><u>Carrying Amount (Fair Value)</u></b>
U.S. government obligations	\$967,314
Domestic corporate bonds	761,402
Domestic stocks	10,227,890
International stocks	2,610,280
International fixed income	601,067
Short-term U.S. government obligations	3,038
Short-term domestic corporate bonds	6,039
Short-term international fixed income	79,902
<b>Total investments-category 1</b>	<b><u>15,256,932</u></b>

#### Investments—Not categorized

##### Investments held by broker-dealers under securities loans with cash collateral

U.S. government obligations	428,029
Domestic corporate bonds	168,692
Domestic stocks	1,244,886
International stocks	253,771
International fixed income	96,817
Short-term U.S. government obligations	14,613
Short-term domestic corporate bonds	3,544
Short-term international fixed income	2,955
Subtotal	<u>2,213,307</u>

##### Investments held by broker-dealers under securities loans with pooled non-cash collateral

U.S. government obligations	155,883
Domestic corporate bonds	9,312
Domestic stocks	265,593
International stocks	269,694
International fixed income	7,979
Subtotal	<u>708,461</u>
Securities lending short-term collateral investment pool	2,271,784
Real estate equity	2,359,024
Real estate debt	290,825
Alternative investments	2,617,713
Timber	279,587
Subtotal	<u>7,818,933</u>
Total investments-not categorized	<u>10,740,701</u>
<b>Total investments</b>	<b><u>\$25,997,633</u></b>

## Notes to the Financial Statements

(In Thousands of Dollars)

### Securities Lending Transactions

C.R.S. § 24-51-206, and Board policies permit PERA to lend its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. PERA's custodian, The Northern Trust Company, lends securities of the type on loan at year-end for collateral in the form of U.S. and non-U.S. currencies, Organization for Economic Cooperation and Development (OECD) government securities, equities, and irrevocable letters of credit. When the loaned securities and the collateral are denominated in the same currency, the initial collateralization is not less than 102 percent. When the loaned securities and the collateral are in different currencies, the initial collateralization is not less than 105 percent. Collateral is marked to market daily if price movements exceed certain minimal thresholds. There are no restrictions on the amount of securities that can be lent at one time. Securities lent at year-end for cash and securities collateral are classified according to the category for the collateral in the preceding schedule of custodial credit risk.

As of December 31, 2002, PERA had no credit risk exposure to borrowers because the collateral held exceeds the amount borrowed. The contract with PERA's custodian provides that the custodian will indemnify PERA if there has been a bankruptcy filing by the borrower and if the custodian is unable to recover loaned securities due to the custodian's inability to comply with the contract. PERA had no losses on securities lending transactions resulting from the default of a borrower or the lending agent for the year ended December 31, 2002.

PERA or the borrower can terminate any security loan on demand. The weighted average loan life of overall loans was 101.6 days as of December 2002. Cash collateral is invested in a custom collateral account made up of a combination of The Northern Trust Company's Collective Short-Term Extendible Portfolio (53.5 percent), The Northern Trust Company's Short-Term Advantage Fund (3.6 percent), and The Northern Trust Company's Global Core Collateral Section (42.9 percent). The weighted average maturities of these funds as of December 31, 2002, were 9, 292, and 25 days, respectively. The Northern Trust Company manages withdrawals daily. Cash collateral may also be invested separately in term loans, in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. PERA cannot pledge or sell non-cash collateral unless the borrower defaults.

The following table represents the balances relating to the securities lending transactions as of December 31, 2002, and December 31, 2001.

	Carrying Amount (Fair Value) of Underlying Securities 12/31/2002	Carrying Amount (Fair Value) of Underlying Securities 12/31/2001
<b>Securities Lent</b>		
U.S. government obligations	\$598,526	\$355,529
Domestic corporate bonds	181,547	172,729
Domestic stocks	1,510,479	1,455,894
International stocks	523,465	653,624
International fixed income	107,751	125,601
<b>Total</b>	<b>\$2,921,768</b>	<b>\$2,763,377</b>

As of December 31, 2002, the fair value of lent securities was \$2,921,768. The fair value of associated collateral was \$3,012,979. Of this amount, \$2,271,784 represents the fair value of cash collateral and \$741,195 represents the fair value of the non-cash collateral. Non-cash collateral, which PERA does not have the ability to pledge or sell unless the borrower defaults, is not reported in the balance sheet. PERA's income net of expenses from securities lending was \$10,171 for the year ended December 31, 2002. As of December 31, 2001, the fair value of lent securities was \$2,763,377. The fair value of associated collateral was \$2,878,813. Of this amount, \$2,447,007 represents the fair value of cash collateral and \$431,806 represents the fair value of the non-cash collateral. PERA's income net of expenses from securities lending was \$10,334 for the year ended December 31, 2001.

### Reverse Repurchase Agreements

PERA is allowed to enter into reverse repurchase agreements under state statute, C.R.S. §24-51-206. A reverse repurchase agreement is a transaction in which a broker-dealer or financial institution transfers cash to PERA and PERA transfers securities to the broker-dealer or financial institution and promises to repay the cash plus interest in exchange for the same or similar securities. The proceeds from the reverse repurchase agreements are used for investment purposes.

PERA, within its real estate debt holdings, was obligated under three reverse repurchase agreements as of December 31, 2002. The agreements were entered into on December 26, 2002, with a maturity date of June 26, 2003. Credit risk exposure for PERA arises when the broker-dealer does not return the securities or their value at the conclusion of the reverse repurchase agreement. The amount of the potential economic loss is the difference between the fair value of the securities related to the reverse repurchase agreements, including accrued interest, and the amount of the obligations, including accrued interest, under the reverse repurchase agreements. As of December 31, 2002, PERA is exposed to a potential economic loss of \$3,436. The fair value of the securities relating to the reverse repurchase agreements plus accrued interest is \$9,493 and the total amount of the reverse purchase agreements plus accrued interest is \$6,057. PERA's investment strategy is to increase the book yield of the portfolio by entering into an interest rate swap disclosed in Note 5. The interest PERA receives on the interest rate swap is reset quarterly to coincide with the interest rate paid on the reverse repurchase agreements which is also reset quarterly. The reverse repurchase agreements will be rolled over every six months to coincide with the maturity date of the interest rate swap. There were no losses during the period due to default and there were no violations of legal or contractual provisions.

### Notes to the Financial Statements

(In Thousands of Dollars)

#### Alternative Investments

The following table presents the categories of investments within the alternative investment asset class at December 31, 2002.

	<b>Fair Value at December 31, 2002</b>
Leveraged buyout funds	\$1,474,350
Venture capital	442,234
International private equity funds	701,129
<b>Total alternative investments</b>	<b>\$2,617,713</b>

#### NOTE 5—FINANCIAL INSTRUMENTS WITH OFF-BALANCE SHEET RISK

##### Covered Call Options

PERA writes covered call options as an investment technique to enhance portfolio returns and to reduce portfolio volatilities. When a call option is sold (written), it obligates PERA to deliver stock at a set price for a specific period of time. PERA receives premium income for options written, and the value of the options are recorded as a liability due to the obligation to deliver stock. The liability is adjusted to reflect the current fair value of the options written. Fair value is the amount that PERA would pay to terminate the contracts at the reporting date. If a call option expires, PERA realizes a gain to the extent of the premium received. If a call option is exercised, the premium received is realized as a gain. A gain or loss is also realized on the underlying security to satisfy the delivery obligation. PERA may repurchase a call option written at its discretion when it is favorable to do so. When a contract is repurchased, the liability is reduced and the difference between the premium received and the amount paid to close the contract is realized as a gain or loss.

By writing covered call options, in exchange for the premium income, PERA foregoes the opportunity for capital appreciation above the exercise price should the market price of the underlying security increase. As a result, PERA bears the risk of an unfavorable change in the price of the security underlying the written option.

PERA had written covered call options on 59 companies' securities as of December 31, 2002. Premiums received on the sales of these options were \$6,183 and the fair value on the options as of December 31, 2002, was (\$3,170).

##### Currency Option

PERA purchased a European-style currency call option on a notional \$50,000 worth of Japanese yen (JPY). A European-style option means that exercise of the option can only be done at expiration, in this case July 28, 2004. The exercise price is JPY 125. This transaction was traded over-the-counter and was entered into to protect against the currency rate fluctuation of an investment denominated in Korean won. This contract carries market risk due to adverse fluctuations in the foreign exchange rate of the Japanese yen in relation to the exercise price. Prior to expiration of this contract, PERA records the fair value of this contract in U.S. dollars. At December 31, 2002, the fair value of the contract was \$957.

#### Forward Foreign Exchange Contracts

A currency forward is a contractual agreement between two parties to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. Forward commitments are not standardized and carry credit risk due to the possible nonperformance by one of the counterparties. The maximum potential loss is the aggregate face value in U.S. dollars at the time the contract was opened; however, the likelihood of such loss is remote. No losses occurred in 2002. Forwards are usually traded over-the-counter. These transactions are entered into in order to hedge risks from exposure to foreign currency rate fluctuation and to facilitate trade settlement of foreign security transactions. Forwards carry market risk resulting from adverse fluctuations in foreign exchange rates. Recognition of realized gain or loss depends on whether the currency exchange rate has moved favorably or unfavorably to the contract holder upon termination of the contract. Prior to termination of the contract, PERA records the unrealized currency translation gain or loss based on the applicable forward exchange rates.

At December 31, 2002, PERA had outstanding forward foreign exchange contracts to purchase foreign currencies with a fair value of \$783,770 and outstanding contracts to sell foreign currencies with a fair value of (\$780,191).

#### Interest Rate Swaps

Interest rate swaps represent an agreement between counterparties to exchange interest cash flows by reference to specified indexes on a notional principal amount for a specified period. PERA entered into one interest rate swap on December 26, 2002, with a termination date of December 30, 2012. The counterparty will pay PERA USD-LIBOR-BBA on the notional amount quarterly. PERA will pay the counterparty a fixed rate on the notional amount semiannually.

PERA is exposed to credit risk in the event of nonperformance by the counterparty to the financial instrument. The risk that the counterparty will fail to meet its obligation is low. Interest rate swaps carry market risk, which results from adverse market changes and changes in interest rates.

The fair value of this contract was (\$77) as of December 31, 2002.

The financial instruments discussed above involve, to varying degrees, elements of market risk to the extent of future market movements in excess of the amounts recognized in the Statement of Fiduciary Net Assets. Market risk arises from the potential unfavorable change in the value of the underlying instruments. The following contract or notional amounts of these instruments reflect the extent of PERA's involvement in each class of financial instrument as of December 31, 2002. The contract or notional amounts do not represent the exposure to market loss.

<b>Contracts</b>	<b>Description</b>	<b>Contract or Notional Value</b>
19,595	Covered call options written (domestic)	\$90,978
1	Currency call option	50,000
81	Long forward foreign exchange contracts	755,463
81	Short forward foreign exchange contracts	(755,463)
1	Interest rate swap	\$6,000

## Notes to the Financial Statements

(In Thousands of Dollars)

### Mortgage-Backed Securities

A mortgage-backed security depends on the underlying pool of mortgage loans to provide the cash flow to make principal and interest payments on the security. A decline in interest rates can result in prepayments, which reduces the fair value of the security. If homeowners pay on mortgages longer than anticipated, the cash flows are greater and the return on investment would be higher than anticipated. A collateralized mortgage obligation (CMO), is a mortgage-backed security that is comprised of classes of bonds created by prioritizing the cash flows of the underlying mortgage pool. This redistributes prepayment risk among the various bond classes in the CMO structure.

PERA invests in mortgage-backed securities to enhance fixed income returns. Mortgage-backed securities are subject to credit risk, the risk that the borrower will be unable to meet its obligations. These securities are also subject to prepayment risk, which is the risk that a payment will be made in excess of the regularly scheduled principal payment. Prepayment risk is comprised of two risks: call risk, the risk that prepayments will occur when interest rates have declined, and extension risk, the risk that prepayments will not be made when interest rates have increased.

As of December 31, 2002, the fair value of government mortgage-backed securities was \$774,521 and the fair value of asset-backed securities was \$28,172. The fair value of CMOs as of December 31, 2002, was \$117,943.

### NOTE 6—COMMITMENTS AND CONTINGENCIES

As of December 31, 2002, PERA had commitments for the future purchase of investments in alternative investments of \$1,945,598, real estate of \$558,350, and timber of \$1,726.

Certain legal proceedings are pending against PERA arising from its normal activities that, based on the facts presently available and the advice of legal counsel, will not have a material adverse effect on PERA's financial condition on settlement.

### NOTE 7—VOLUNTARY INVESTMENT PROGRAM-PERA'S 401(K) DEFINED CONTRIBUTION PENSION PLAN DESCRIPTION

The Voluntary Investment Program is an Internal Revenue Code Section 401(k) defined contribution plan administered by PERA to provide benefits at retirement to PERA members in the State and School, Municipal, and Judicial Division Trust Funds. Plan participation is voluntary to all PERA members as described in Note 1, and contributions are separate from the defined benefit contributions made to PERA. At December 31, 2002, there were 70,664 participants with account balances.

In 2002, participants could contribute the lesser of \$11,000 (actual dollars), or 100 percent of compensation less PERA contributions and employer 401(k) contributions. Catch-up contributions up to \$1,000 (actual dollars) in 2002 were allowed for participants who have attained age 50 before the close of the Plan Year, subject to the limitations of IRC Section 414(v). Employer contributions are allowable in the plan with total participant and employer contributions limited to \$40,000 (actual dollars)

per participant in 2002. The contribution requirements for the program are established under C.R.S. § 24-51-1402.

Participants of the Voluntary Investment Program are allowed to change their contribution amounts, transfer account balances among seventeen investment funds, or change the contribution percentages designated to each fund on a daily basis. The seventeen investment funds are: Northern Trust Short Term Fund, PIMCO Low Duration Fund, PIMCO Total Return Fund, Dodge & Cox Balanced Fund, PERA Growth & Income Stock Fund, Vanguard S&P 500 Index Fund, Janus Fund, Fidelity Contrafund, Morgan Stanley Institutional Mid Cap Value Fund, Janus Enterprise Fund, American Funds EuroPacific Growth Fund, Fidelity Freedom Income Fund, Fidelity Freedom 2000 Fund, Fidelity Freedom 2010 Fund, Fidelity Freedom 2020 Fund, Fidelity Freedom 2030 Fund, and Fidelity Freedom 2040 Fund. Participants may access their funds through loans, in-service withdrawals, and distributions as allowed under the Internal Revenue Code. Plan provisions are established or are authorized to be established by the Board under C.R.S. §§ 24-51-1401 *et. seq.*

### Significant Accounting Policies-401(k) Voluntary Investment Program

#### Basis of Accounting

The Voluntary Investment Program financial statements are prepared using the accrual basis of accounting. Employer and participant contributions are recognized as revenues in the period in which the employer pays compensation to the participant.

#### Method Used to Value Investments

Plan investments are presented at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates.

#### Investment Concentrations

The following investments of the Voluntary Investment Program represent 5 or more percent of the total plan net assets at December 31, 2002.

Northern Trust Short Term Fund	\$ 59,074
Pacific Investment Management Company (PIMCO) Low Duration Fund	37,518
Pacific Investment Management Company (PIMCO) Total Return Fund	84,068
Dodge & Cox Balanced Fund	108,670
PERA Growth & Income Stock Fund (Managed by PERA Staff)	191,896
Fidelity Contrafund	105,545

### NOTE 8—HEALTH CARE TRUST FUND-PERA'S COST-SHARING MULTIPLE-EMPLOYER DEFINED BENEFIT HEALTHCARE PLAN

#### Plan Description and Benefit Provisions

The Health Care Trust Fund (HCTF) provides a health care premium subsidy to participating PERA benefit recipients who choose to enroll. C.R.S. §§ 24-51-1201 *et. seq.* specifies the eligibility for enrollment and the amount of the premium subsidy. The maximum monthly subsidy is \$230



### Notes to the Financial Statements

(In Thousands of Dollars)

per month for benefit recipients who are under 65 years of age and who are not entitled to Medicare; and \$115 per month for benefit recipients who are 65 years of age or older or who are under 65 years of age and entitled to Medicare. The maximum subsidy is for benefit recipients whose retirement benefits are based on 20 years or more of service credit. For those with less service credit, the subsidy is reduced by 5 percent for each year fewer than 20 years. The benefit recipient pays the remaining portion of the premium if the subsidy does not cover the entire amount. As of December 31, 2002, the Program had 35,418 enrollees of whom 11,412 were under 65 and 24,006 who were 65 or older.

The HCTF offers two general types of health plans. The health maintenance organization (HMO) plans the HCTF uses are insured through third party vendors. The Mutual of Omaha health care plans and the Caremark Prescription Drug Program are self-insured plans.

In addition, any PERA employer can voluntarily elect to provide health care coverage through the health care program for its employees who are PERA members. PERA acts as a purchaser of private insurance to obtain economies of scale for the employers that elect to join in the joint purchasing arrangement. The insurance companies who provide coverage through the program rate all employers with less than 250 employees together in one category. For employers with more than 250 employees, each employer will be risk rated individually by the insurance companies and receive their own premium rates. In both cases, there is no transfer of risk to the HCTF, to PERA, or between the participating employers. The insurance companies providing the benefits bear the risk for the plan. The employers and/or participants pay the premiums for the coverage. PERA collects the premiums and deposits them into the HCTF and then pays these premiums to the insurance companies who provide the coverage. As of December 31, 2002, PERA had 32 employers in the program with 866 active members enrolled. Each of these employers had fewer than 250 employees.

Dental and vision plans are also available to participants. The risk is born by the insurance companies that are contracted with to provide the coverage. The participants pay the premiums for the coverage. PERA collects the premiums and deposits them into the HCTF and then pays these premiums to the insurance companies who provide the coverage. There is no subsidy provided for the dental and vision plans. As of December 31, 2002, there were 5,605 members and retirees enrolled in the dental plans and 7,762 members and retirees enrolled in the vision plans.

The Board has the authority to contract, self-insure, and make disbursements necessary to carry out the purposes of the Program. PERA contracts with a major medical indemnity carrier to administer claims for the self-insured plans and with HMOs providing services within Colorado.

### Membership

Enrollment in the Health Care Program is voluntary for the following:

- PERA benefit recipients and their dependents.
- Guardians of children receiving PERA survivor benefits if the children are enrolled in the Program.
- Surviving spouses of deceased retirees who are not receiving PERA benefits, but were enrolled in the Program when death occurred.

- Divorced spouses of retirees who are not receiving PERA benefits, but were enrolled in the Program when the divorce occurred.
- Members while receiving short-term disability program payments.
- Members whose employers have elected to provide coverage through the health care program and such members' dependents.

### Contributions

The HCTF's retiree subsidy is funded by affiliated employer contributions for all PERA members equal to 1.64 percent of covered salaries in the State and School Division, 2.31 percent of covered salaries in the Municipal Division, and 4.37 percent of covered salaries in the Judicial Division. The contribution requirements for the affiliated employers are established under C.R.S. § 24-51-208.

### NOTE 9—SUBSEQUENT EVENTS

During the 2003 legislative session, several bills were passed by the Legislature and were signed into law or were vetoed by the Governor. The features of the bills that could potentially impact the financial statements to the greatest extent are listed below:

- Senate Bill 101— under this bill, employer contribution rates would remain constant when PERA's funding level is between 95 and 110 percent.
  - Any funding level between 85 and 95 would be amortized over 30 years and gainsharing provisions would not be in effect.
  - MatchMaker contributions would end after December 2003 payrolls.
  - Gainsharing provisions for the MatchMaker program and the Health Care Trust Fund would resume whenever PERA is over 110 percent funded.
  - Funding levels below 85 percent or above 115 percent would be amortized over 20 years.
  - Employer contributions paid would remain at their current level through June 30, 2004, for the State and School Division Trust Fund and the Judicial Division Trust Fund, and contributions would then increase depending on PERA's funding level. Year-to-year increases of employer contributions would be limited to 0.625 of 1 percent of salary.
  - Employers would need to send their contributions to PERA by the fifth business day after employees are paid.
  - A portion of the purchase service cost will be required to be transferred to the Health Care Trust Fund: 1.1 percent of HAS at the time of the purchase, for each month purchased, with interest to the date of transfer.

The bill was passed on May 7, 2003, by the Legislature and was vetoed by the Governor on May 22, 2003.

**Notes to the Financial Statements**

(In Thousands of Dollars)

- Senate Bill 03-250—This bill would merge the assets and liabilities of the Denver Public Schools Retirement System into the State and School Division Trust fund under conditions that are fair actuarially to both systems. The date of merger is January 1, 2005. All assets, liabilities and obligations of the DPSRS will become the assets, liabilities, and obligations of PERA on that date. On or before July 1, 2004, any of the parties to the merger may terminate the merger for any reason.

This bill passed the Senate on March 26, 2003, and the House passed the bill on April 22, 2003. Governor Owens signed the bill on June 5, 2003.

**Required Supplementary Information**

*Schedule of Funding Progress For the Years Ended December 31*  
(In Thousands of Dollars)

	2002	2001	2000	1999	1998	1997
<b>State and School Division Trust Fund</b>						
Actuarial value of assets (a)	\$28,551,607	\$28,947,935	\$27,749,435	\$24,976,228	\$21,644,949	\$18,572,185
Actuarial accrued liability (b)	32,463,918	29,469,608	26,492,574	24,311,246	22,498,963	20,264,739
Total unfunded (overfunded) actuarial accrued liability (UAAL/OAAL) (b-a)	3,912,311	521,673	(1,256,861)	(664,982)	854,014	1,692,554
Funded ratio (a/b)	87.9%	98.2%	104.7%	102.7%	96.2%	91.6%
Covered payroll	5,278,586	4,954,605	4,561,133	4,309,573	4,098,423	3,877,988
UAAL/OAAL as a percentage of covered payroll	74.1%	10.5%	(27.6)%	(15.4)%	20.8%	43.6%
<b>Municipal Division Trust Fund</b>						
Actuarial value of assets (a)	\$1,839,632	\$1,822,413	\$1,717,017	\$1,524,667	\$1,300,574	\$1,098,291
Actuarial accrued liability (b)	1,966,143	1,746,761	1,541,014	1,413,208	1,301,869	1,121,444
Total unfunded (overfunded) actuarial accrued liability (UAAL/OAAL) (b-a)	126,511	(75,652)	(176,003)	(111,459)	1,295	23,153
Funded ratio (a/b)	93.6%	104.3%	111.4%	107.9%	99.9%	97.9%
Covered payroll	474,760	436,582	399,737	380,064	359,025	314,167
UAAL/OAAL as a percentage of covered payroll	26.6%	(17.3)%	(44.0)%	(29.3)%	0.4%	7.4%
<b>Judicial Division Trust Fund</b>						
Actuarial value of assets (a)	\$162,901	\$165,130	\$159,426	\$142,499	\$124,059	\$106,012
Actuarial accrued liability (b)	165,672	150,943	132,653	122,237	115,228	107,888
Total unfunded (overfunded) actuarial accrued liability (UAAL/OAAL) (b-a)	2,771	(14,187)	(26,773)	(20,262)	(8,831)	1,876
Funded ratio (a/b)	98.3%	109.4%	120.2%	116.6%	107.7%	98.3%
Covered payroll	26,357	24,140	21,673	20,123	19,854	19,666
UAAL/OAAL as a percentage of covered payroll	10.5%	(58.8)%	(123.5)%	(100.7)%	(44.5)%	9.5%
<b>Health Care Trust Fund</b>						
Actuarial value of assets (a)	\$161,700	\$138,198	\$116,034	\$100,825	\$82,929	\$76,957
Actuarial accrued liability (b)	813,211	782,961	809,709	782,698	591,222	595,597
Total unfunded actuarial accrued liability (UAAL) (b-a)	651,511	644,763	693,675	681,873	508,293	518,640
Funded ratio (a/b)	19.9%	17.7%	14.3%	12.9%	14.0%	12.9%
Covered payroll	5,779,703	5,415,327	4,982,543	4,709,760	4,477,302	4,211,821
UAAL as a percentage of covered payroll	11.3%	11.9%	13.9%	14.5%	11.4%	12.3%

The accompanying notes are an integral part of the Required Supplementary Information.

## Financial Section

### Required Supplementary Information

Schedule of Employer Contributions For the Years Ended December 31  
(In Thousands of Dollars)

	2002	2001	2000	1999	1998	1997
<b>State and School Division Trust Fund</b>						
Dollar amount of annual required contribution (ARC)	\$315,825	\$314,649	\$420,031	\$422,025	\$409,749	\$392,898
ARC <sup>1</sup>	6.37%	6.84%	9.82%	10.46%	10.61%	10.71%
% ARC contributed	100%	100%	100%	100%	100%	100%
<b>Municipal Division Trust Fund</b>						
Dollar amount of annual required contribution (ARC)	\$21,972	\$25,435	\$32,639	\$31,418	\$30,186	\$27,253
ARC <sup>1</sup>	5.02%	6.26%	8.90%	9.05%	9.20%	9.20%
% ARC contributed	100%	100%	100%	100%	100%	100%
<b>Judicial Division Trust Fund</b>						
Dollar amount of annual required contribution (ARC)	\$383	\$637	\$2,726	\$2,689	\$2,693	\$2,636
ARC <sup>1</sup>	1.55%	1.79%	13.40%	14.05%	14.20%	14.20%
% ARC contributed	100%	100%	100%	100%	100%	100%
<b>Health Care Trust Fund</b>						
Dollar amount of annual required contribution (ARC)	\$92,562	\$74,324	\$51,351	\$43,136	\$33,522	\$31,750
ARC <sup>1</sup>	1.16%	1.48%	1.10%	0.95%	0.80%	0.80%
% ARC contributed	100%	100%	100%	100%	100%	100%

<sup>1</sup> As a percent of covered payroll. ARC based on prior year-end actuarial study.

*The accompanying notes are an integral part of the Required Supplementary Information.*

Notes to Required Supplementary Information

NOTE 1—DESCRIPTION

The historical trend information about the State and School Division Trust Fund, Municipal Division Trust Fund, Judicial Division Trust Fund, and the Health Care Trust Fund is presented as required supplementary information. This information is intended to help users assess the funding status on a going-concern basis and to assess progress made in accumulating assets to pay benefits when due.

NOTE 2—ACTUARIAL ASSUMPTIONS AND METHODS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

	State and School Division Trust Fund	Municipal Division Trust Fund	Judicial Division Trust Fund	Health Care Trust Fund
Valuation date	12/31/02	12/31/02	12/31/02	12/31/02
Actuarial cost method	Entry age normal	Entry age normal	Entry age normal	Entry age normal
Amortization method	Level percent, Open	Level percent, Open	Level percent, Open	Level percent, Open
Remaining amortization period <sup>1</sup>	Infinite	Infinite	13	20
Asset valuation method	4-year smoothed market	4-year smoothed market	4-year smoothed market	4-year smoothed market
Actuarial assumptions				
Investment rate of return <sup>2</sup>	8.75%	8.75%	8.75%	8.75%
Projected salary increases <sup>2</sup>	4.5–10.0%	5.5–12.9%	5.0–6.01%	Not applicable
Cost-of-living adjustments	3.5% compounded annually	3.5% compounded annually	3.5% compounded annually	None
Health care inflation factor	Not applicable	Not applicable	Not applicable	Zero

<sup>1</sup> The actuarially determined annual required contribution rate (ARC) for 2003 based on a 30-year funding period of the unfunded actuarial accrued liability and a payroll growth rate assumption of 4.5 percent is as follows: State and School Division Trust Fund 12.13 percent, Municipal Division Trust Fund 9.9 percent, Judicial Division Trust Fund 10.57 percent, and the Health Care Trust Fund 1.01 percent.

<sup>2</sup> Includes inflation at 4.50 percent.

### Notes to Required Supplementary Information

#### NOTE 3—SIGNIFICANT FACTORS AFFECTING TRENDS IN ACTUARIAL INFORMATION

##### Pension Plans

###### *2002 Changes in Plan Provisions Since Prior Year—Combined State and School, Municipal, and Judicial Division Trust Funds:*

- No material changes.

###### *2001 Changes in Plan Provisions Since Prior Year—Combined State and School, Municipal, and Judicial Division Trust Funds:*

- Mortality, withdrawal, retirement, disability, and pay increase assumptions were changed based on the actuarial experience study performed in 2001.

###### *2000 Changes in Plan Provisions Since Prior Year—State and School, Municipal, and Judicial Division Trust Funds:*

- A Modified Rule of 80 provision was added. Members whose age plus years of service total 80 or more will retire without reduction for early retirement, if they are at least age 55 and have a minimum of five years of service.
- The annual increase for PERA benefit recipients was fixed at 3.5 percent compounded annually.
- If the actuarial valuation determines that either the State and School or Judicial Division is overfunded, then for the following year:
  - The employer contribution rate will be reduced by 20 percent of the ten-year amortization of the overfunding, with statutory minimum reductions. In addition, a portion of the employer contribution will be made available for MatchMaker, the defined contribution plan matching program. The maximum amount available for MatchMaker will be 2 percent of covered salaries plus 50 percent of the ten-year amortization of the overfunding. The level of the matching contributions will be determined by the Board for each calendar year based on the amount available. In addition, a portion of the employer contribution equal to 30 percent of the ten-year amortization of the overfunding will be allocated to the Health Care Trust Fund.
- If the actuarial valuation determines that the Municipal Division is overfunded, then for the following year:
  - The employer contribution rate will be temporarily reduced by 20 percent of the ten-year amortization of the overfunding. In addition, a portion of the employer contribution will be made available for MatchMaker, the defined contribution plan matching program. The maximum amount available for MatchMaker will be 0.5 percent of covered salaries plus 50 percent of the ten-year amortization of the overfunding. The level of the matching contributions will be determined by the Board for each calendar year based on the amount available. In addition, a portion of the employer contribution equal to 30 percent of the ten-year amortization of the overfunding will be allocated to the Health Care Trust Fund.

###### *1999 Changes in Plan Provisions Since Prior Year—State and School, Municipal, and Judicial Division Trust Funds:*

- The member contribution rate for the State Troopers was reduced from 11.5 percent to 10.0 percent, effective July 1, 1999.
- Increased the money purchase benefit and the matching percentages on payments to terminating members to 50 percent of the member's contributions and interest if refunded prior to retirement eligibility or age 65, and 100 percent if refunded when eligible for retirement or age 65, or upon the death of a member. Increases in the match distribution and money purchase benefit are effective July 1, 1999.
- Increased the employer contribution rate designated for the Health Care Trust Fund from 0.8 percent of salary to 1.1 percent by reducing the rate designated for the pension trust fund by 0.3 percent on July 1, 1999.

###### *1998 Changes in Plan Provisions Since Prior Year—State and School, Municipal, and Judicial Division Trust Funds:*

- The employer contribution rate for the State and School Division, except State Troopers, was changed from 11.5 percent to 11.4 percent, effective July 1, 1998.
- The eligibility for service retirement benefits for members, except State Troopers, was changed to include age 50 with 30 years of service credit.
- In the calculation of reduced service retirement benefits for members, except State Troopers, the reduction was changed from 4 percent to 3 percent for members who retire at or after age 55 and before age 60.
- In the calculation of reduced service retirement for State Troopers, the reduction was changed from 4 percent to 3 percent for members who retire at or after age 50 and before age 60.

###### *1997 Changes in Plan Provisions Since Prior Year—State and School, Municipal, and Judicial Division Trust Funds:*

- The Highest Average Salary (HAS) for members of the Judicial Division was changed from a three-year average to the highest one year's salary.
- The State Division Trust Fund and the School Division Trust Fund were merged into the State and School Division Trust Fund.
- The maximum amortization period for the three Division Trust Funds was reduced from 60 years to 40 years.
- The employer contribution rate for the State and School Division was reduced 0.1 percent to 11.5 percent.
- The benefit formula for years over 20 was changed retroactively from 1.5 percent to 2.5 percent of HAS beginning July 1997, up to a maximum of 100 percent of HAS.

## Notes to Required Supplementary Information

### Health Care Trust Fund

#### *2002 Changes in Plan Provisions Since Prior Actuarial*

##### *Valuation—Health Care Trust Fund:*

- No material changes.

#### *2001 Changes in Plan Provisions Since Prior Actuarial*

##### *Valuation—Health Care Trust Fund:*

- Mortality and rate of health care program participation assumptions were changed based on the actuarial experience study performed in 2001.

#### *2000 Changes in Plan Provisions Since Prior Actuarial*

##### *Valuation—Health Care Trust Fund:*

- If the actuarial valuation for the State and School, Municipal, or Judicial Division Trust Fund determines that any Division is overfunded, then for the following year a portion of that Division's employer contribution, equal to 30 percent of the ten-year amortization of the overfunding, will be allocated to the Health Care Trust Fund.

#### *1999 Changes in Plan Provisions Since Prior Actuarial*

##### *Valuation—Health Care Trust Fund:*

- Increasing the employer contribution rate designated for the Health Care Trust Fund from 0.8 percent of salary to 1.1 percent by reducing the rate designated for the pension trust fund by 0.3 percent on July 1, 1999.
- Doubling the amount of the Health Care Program subsidy for pre-Medicare retirees up to a maximum of \$230 (actual dollars) per month for a retiree with 20 or more years of service, effective July 1, 2000.

#### *1998 Changes in Plan Provisions Since Prior Actuarial*

##### *Valuation—Health Care Trust Fund:*

- The plan provisions were changed to allow benefit recipients to cover dependent children up to age 24.

#### *1997 Changes in Plan Provisions Since Prior Actuarial*

##### *Valuation—Health Care Trust Fund:*

- The investment rate of return assumption was increased from 8.5 percent to 8.75 percent.
- Mortality and inflation assumptions were changed based on the actuarial experience study performed in 1996.

## Financial Section

### Schedule of Administrative Expenses

For the Year Ended December 31

(In Thousands of Dollars)

	2002	2001
<b>Personnel services:</b>		
Salaries	\$14,234	\$12,337
Employee benefits	3,904	3,307
<b>Total personnel services</b>	<b>18,138</b>	<b>15,644</b>
<b>Staff education:</b>		
Tuition assistance program	38	22
PERA-required education	291	305
<b>Total staff education</b>	<b>329</b>	<b>327</b>
<b>Professional contracts:</b>		
Actuarial contracts	326	312
Audits	158	115
Medical exams	0	1
Investment counsel	746	856
Legal and legislative counsel	1,097	1,141
Computer services and consulting	515	597
Management consulting	488	731
Health care consultants	188	93
Other	170	248
<b>Total professional contracts</b>	<b>3,688</b>	<b>4,094</b>
<b>Miscellaneous:</b>		
Equipment rental and services	782	983
Memberships	173	157
Publications and subscriptions	62	72
Travel and local expense	487	637
Auto expense	20	32
Telephone	324	348
Postage	938	814
Insurance	173	148
Printing	577	442
Office supplies	322	383
Building rent, supplies, and utilities	643	546
<b>Total miscellaneous</b>	<b>4,501</b>	<b>4,562</b>
<b>Total budgeted expense</b>	<b>26,656</b>	<b>24,627</b>
Depreciation expense	1,637	1,707
401(k) Voluntary Investment Program expense	1,803	1,431
<b>Total expense</b>	<b>30,096</b>	<b>27,765</b>
Interfund—tenant and other expense	(194)	(416)
Interfund—Life Insurance Reserve	(590)	(726)
Interfund—CIF investment expense	(5,874)	(5,179)
<b>Total administrative expense</b>	<b>\$23,438</b>	<b>\$21,444</b>
<b>Allocation of administrative expense:</b>		
State and School Division Trust Fund	\$17,752	\$16,363
Municipal Division Trust Fund	1,539	1,437
Judicial Division Trust Fund	20	19
401(k) Voluntary Investment Program	3,289	2,946
Health Care Trust Fund	838	679
<b>Total allocation</b>	<b>\$23,438</b>	<b>\$21,444</b>

**Schedule of Investment Expenses**

For the Year Ended December 31  
(In Thousands of Dollars)

	2002	2001
<b>External manager expenses</b>		
Domestic fixed income	\$2,061	\$1,852
Domestic equity	4,374	6,606
International equity	10,935	11,104
International fixed income	553	542
Real estate debt & equity	31,385	23,291
Alternative investments	21,887	29,672
Timber investments	3,648	(646)
<b>Total external manager expenses</b>	74,843	72,421
<b>Internal manager expenses</b>	5,874	5,179
<b>Other investment expenses and custody fees</b>	2,624	2,945
<b>Total expenses</b>	83,341	80,545
<b>Expenses allocated to the Insurance Dividend Reserve</b>	(47)	(56)
<b>Total investment expenses</b>	<b>\$83,294</b>	<b>\$80,489</b>

**Schedule of Changes in Assets and Liabilities—Insurance Dividend Reserve (Agency Fund)**

For the Year Ended December 31  
(In Thousands of Dollars)

	Balance as of January 1, 2002	Net Change	Balance as of December 31, 2002
<b>Assets</b>			
Cash and short-term investments	\$399	(\$49)	\$350
Securities lending collateral	1,570	(304)	1,266
<b>Total cash and short-term investments</b>	1,969	(353)	1,616
<b>Receivables</b>			
Benefit	584	(584)	0
Investment settlements and income	83	(22)	61
<b>Total receivables</b>	667	(606)	61
<b>Investments at fair value</b>			
U.S. government obligations	819	45	864
Domestic corporate bonds	552	(120)	432
Domestic stocks	9,218	(2,929)	6,289
International stocks	2,289	(557)	1,732
International fixed income	439	(46)	393
Real estate equity	1,580	(266)	1,314
Real estate debt	151	12	163
Alternative investments	1,863	(405)	1,458
Timber investments	162	(6)	156
<b>Total investments</b>	17,073	(4,272)	12,801
<b>Total assets</b>	<b>\$19,709</b>	<b>(\$5,231)</b>	<b>\$14,478</b>
<b>Liabilities</b>			
Investment settlements and other	\$18,139	(\$4,927)	\$13,212
Security lending obligations	1,570	(304)	1,266
<b>Total liabilities</b>	<b>\$19,709</b>	<b>(\$5,231)</b>	<b>\$14,478</b>

## Financial Section

### Schedule of Other Deductions/(Additions)

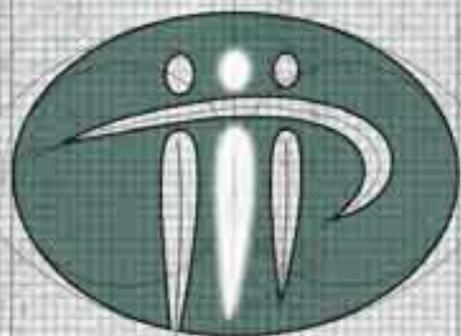
For the Year Ended December 31

(In Thousands of Dollars)

	State and	Municipal	Judicial	Total	401(k)	Total	Health	Totals	
	School Division	Division	Division	Defined	Voluntary	Pension	Care	2002	2001
	Trust	Trust	Trust	Benefit	Investment	Trust	Trust		
	Fund	Fund	Fund	Plans	Program	Funds	Fund		
Unclaimed property transfer	\$794	\$85	\$0	\$879	\$0	\$879	\$0	\$879	\$903
Interfund transfers at retirement	692	(230)	(462)	0	0	0	0	0	0
Plan withdrawal	153	1	0	154	0	154	0	154	75
Administrative fee income	0	0	0	0	0	0	(1,056)	(1,056)	(368)
Alliance fees	0	0	0	0	(627)	(627)	0	(627)	(468)
401(k) participant loan interest	0	0	0	0	(1,374)	(1,374)	0	(1,374)	(1,359)
Miscellaneous	6	19	1	26	(5)	21	0	21	(17)
<b>Total other</b>	<b>\$1,645</b>	<b>(\$125)</b>	<b>(\$461)</b>	<b>\$1,059</b>	<b>(\$2,006)</b>	<b>(\$947)</b>	<b>(\$1,056)</b>	<b>(\$2,003)</b>	<b>(\$1,234)</b>

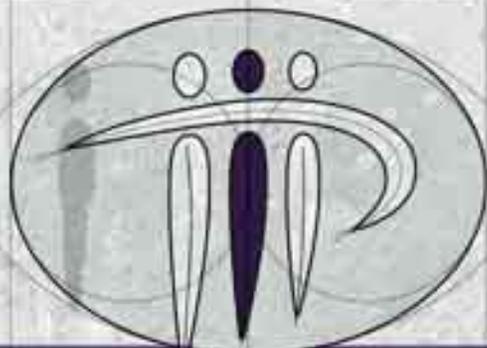


## ***Investment Section***



# **COLORADO PERA**

*One person in the logo represents the Board and staff. These hard-working people are dedicated to providing for the futures of the plan participants. Many talented people work to keep Colorado PERA personal, innovative, and secure.*



### PERA Report on Investment Activity

*Does not include the 401(k) Voluntary Investment Program*

#### State Law

State law gives complete responsibility for the investment of PERA's funds to the Board of Trustees, with some stipulations including:

- The aggregate amount of monies invested in corporate stocks or corporate bonds, notes, or debentures, which are convertible into stock or in investment trust shares cannot exceed 65 percent of the then book value of the fund.
- No investment of the fund in common or preferred stock (or both) of any single corporation can exceed 5 percent of the then book value of the fund.
- The fund cannot acquire more than 12 percent of the outstanding stock or bonds of any single corporation.

#### Board of Trustees' Statutory Fiduciary Responsibility

By state law, the management of PERA's retirement fund is vested in the PERA Board of Trustees who are held to the standard of conduct of fiduciaries in discharging their responsibilities. According to C.R.S. § 24-51-207(2), PERA's trustees, as fiduciaries, must carry out their functions solely in the interest of PERA members and benefit recipients and for the exclusive purpose of providing benefits.

#### Goal

The function of the Association is to provide present and future retirement or survivor benefits for its members. The investment function is managed in a manner to promote long-term financial security for our membership while maintaining the stability of the fund.

#### Outline of Investment Policy

The Board of Trustees determines an asset allocation policy for the fund. PERA currently invests in six asset classes. These classes are domestic equities, international equities, fixed income, real estate, alternatives, and timber. The Board's policy specifies the desired target for these asset classes as well as ranges within which they may operate. This asset allocation policy is driven by an intensive asset/liability analysis every two years. Expected investment returns, risks, and correlation of returns are considered. The characteristics of the fund's liabilities are analyzed in conjunction with expected investment risks and returns. The asset allocation policy seeks to optimize expected total return while minimizing risk. The fund's investment policy supports the implementation of the Board's asset allocation decision.

Investments are managed and monitored in a manner which seeks to balance return and risk within the asset/liability framework. The Deputy Executive Director of Investments is authorized to execute investment transactions on behalf of the Board. Assets are managed both internally and externally. In making investment decisions, the Board and staff utilize external experts in various fields including risk and performance analysis, portfolio construction, rebalancing techniques, and other important investment functions and issues.

#### Corporate Governance

##### *General Policy*

Although PERA is not generally subject to the Employee Retirement Income Security Act of 1974 (ERISA), the PERA Board complies with the position taken by the U.S. Department of Labor (DOL) in February 1988. The DOL has stated that the right to vote shares of stock owned by a pension plan is, in itself, an asset of the plan, and therefore the fiduciary's responsibility to manage the assets includes proxy voting.

##### *Board of Trustees Shareholder Responsibility Committee*

To assist the Board of Trustees in carrying out its fiduciary responsibilities in voting proxies, the Board established a Shareholder Responsibility Committee. The General Counsel serves as an adviser to the Committee. The Board and the Shareholder Responsibility Committee have delegated to the Legal Department the authority to execute and vote all domestic proxies according to the Board Proxy Voting Policy. All proxy issues are reviewed by staff on a case-by-case basis and then voted according to guidelines established by the Policy. PERA retains corporate governance consultants to assist in the proxy voting process.

##### *Proxy Voting Policy*

The Board's Proxy Voting Policy sets forth directives on the following nine issues: Board of Directors, Proxy Contests and Corporate Defenses, Tender Offers and Corporate Defenses, Corporate Restructurings, State of Incorporation, Proxy System, Executive Compensation, Corporate Governance, and Social Issues. The Proxy Voting Policy on Social Issues states that "PERA will abstain on all social issues, and will only vote on financial issues." The voting of proxy ballots for international stocks is delegated to PERA's external international equity managers consistent with certain requirements established by the Board.

*(PERA's Report on Investment Activity was prepared by internal staff.)*

## Investment Brokers/Advisers

Alignment Capital Group  
 Banc of America Securities LLC  
 Bank of New York  
 Bear Stearns & Co. Inc.  
 B-Trade Services LLC  
 Cantor, Fitzgerald & Co.  
 Chase Securities  
 CIBC World Markets  
 Credit Suisse First Boston Corporation  
 Deutsche Bank Alex Brown Inc.  
 Donaldson Lufkin & Jenrette  
 First Albany Corporation  
 Friedman Billings & Ramsey  
 Goldman, Sachs & Co.  
 Heitman Investment Management  
 ING Barings  
 Instinet Clearing Services  
 INVESCO Realty Advisors  
 ITG Inc.  
 J.P. Morgan Securities  
 Jefferies & Co.  
 Knight Securities, L.P.

La Branche & Co Inc.  
 La Salle Advisors Ltd.  
 Lehman Brothers Inc.  
 Lend Lease  
 Merrill Lynch, Pierce, Fenner & Smith Inc.  
 Morgan Stanley & Co. Incorporated  
 Prudential Realty Investors  
 RBC Dain Rauscher  
 Robert W. Baird & Co. Incorporated  
 Robertson Stephens, Inc.  
 RREEF  
 Salomon Smith Barney Inc.  
 Sanders Morris Harris Inc.  
 Sanford C. Bernstein & Co. LLC  
 SG Cowen Securities Corporation  
 Stifel Nicolaus & Company, Inc.  
 SWS Group  
 Thomas Weisel Partners LLC  
 UBS Warburg LLC  
 US Bancorp Piper Jaffray  
 Wells Fargo Securities LLC  
 William Blair & Company LLC

## Investment Section

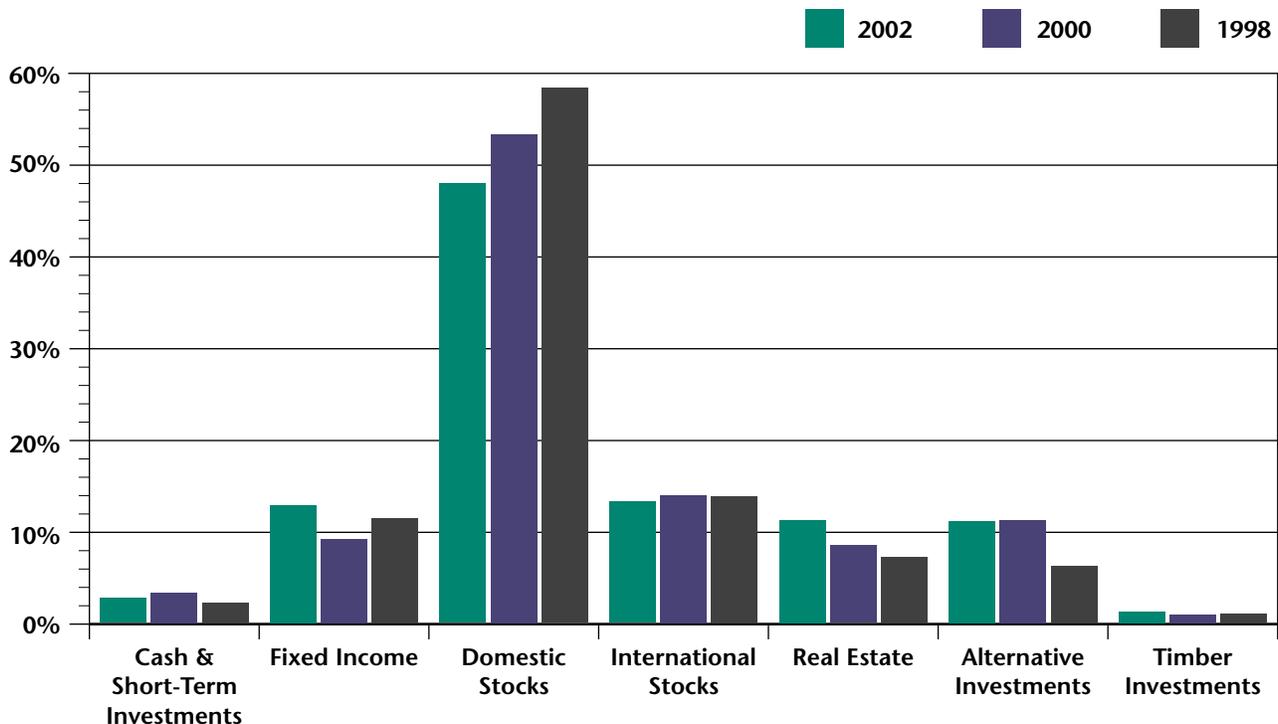
### Investment Summary

Does not include the 401(k) Voluntary Investment Program  
(In Thousands of Dollars)

	Market Value	Percent of Total Market Value		
	December 31, 2002	2002	2000	1998
Cash and short-term investments	\$627,890	2.7%	3.3%	2.2%
<b>Fixed income</b>				
U.S. Government obligations	1,551,226	6.5%	4.6%	4.5%
Domestic corporate bonds	774,893	3.3%	2.3%	4.7%
International fixed income	705,863	3.0%	2.2%	2.2%
<b>Total fixed income</b>	3,031,982	12.8%	9.1%	11.4%
Domestic stocks	11,287,930	47.8%	53.2%	58.2%
International stocks	3,109,452	13.2%	13.9%	13.8%
<b>Real estate</b>				
Real estate equity	2,359,024	10.0%	7.7%	6.5%
Real estate debt	290,825	1.2%	0.7%	0.7%
<b>Total real estate</b>	2,649,849	11.2%	8.4%	7.2%
<b>Alternative investments</b>				
Venture capital	442,234	1.9%	2.6%	1.5%
Leveraged buyout funds	1,474,350	6.2%	5.8%	3.4%
International private equity funds	701,129	3.0%	2.8%	1.3%
<b>Total alternative investments</b>	2,617,713	11.1%	11.2%	6.2%
Timber investments	279,587	1.2%	0.9%	1.0%
<b>Total investments</b>	<b>\$23,604,403</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

### Asset Allocation at Market Value

Does not include the 401(k) Voluntary Investment Program  
Year End December 31



## Fund Performance Evaluation

*Does not include the 401(k) Voluntary Investment Program*

### Evaluation

R.V. Kuhns and Associates and The Northern Trust Company are retained by Colorado PERA to evaluate its Fund performance. Russell Real Estate Advisors, Inc. is used for the real estate portfolio performance evaluation and industry comparisons. In their analysis, R.V. Kuhns and The Northern Trust include all investments within the portfolio, including cash and accrued income. They also make the calculations for annual rates of return.

### Asset Allocation

Colorado PERA's long-term strategic asset allocation policy sets forth specific portfolio targets. In 2002, asset allocation targets approved by the PERA Board of Trustees were as follows: domestic equity 45 percent, international equity 14 percent, domestic and international fixed income 25 percent, alternative investments 8 percent, real estate investments 7 percent, and timber investments 1 percent.

### Total Portfolio Results

For the year ended December 31, 2002, Colorado PERA's total fund returned (11.8) percent, compared to the R.V. Kuhns' Median Public Fund return of (8.4) percent. The Kuhns' Median Public Fund measure is comprised of 73 public pension funds with assets of approximately \$622 billion. Colorado PERA's total fund returned (6.6) percent and 2.3 percent on a three- and five-year annualized basis, compared with Kuhns' Median Public Fund returns of (4.0) percent and 3.4 percent, respectively, for these periods. PERA's 10-year annualized rate of return of 8.3 percent exceeded the Kuhns' Median Public Fund return of 8.1 percent.

### Domestic Equities

The U.S. equity market ended 2002 in negative territory for a third straight year. This was the first time since the 1939 to 1941 period that the U.S. equity market suffered three consecutive years of annual declines. The market struggled in 2002 under pressure from a slow U.S. economy, a loss of investor confidence, overvaluation concerns, anxiety over potential terrorist attacks, inconsistent corporate earnings, and the looming military showdown with Iraq. In addition, concerns about the quality of company earnings were exacerbated by corporate scandals. Stock valuations, which had risen to never seen before heights by the late 1990s, have since fallen sharply.

In 2002, Colorado PERA's total domestic equity portfolio returned (20.5) percent and exceeded its benchmark's (S&P 1500 Index) total return of (21.3) percent. PERA's three-year annualized domestic equity portfolio total return was (10.4) percent, ahead of the S&P 1500 Index's return of (13.2) percent. The five-year annualized total return for PERA's domestic portfolio was 0.1 percent, compared to the S&P 1500 Index's total return of (0.1) percent. Portfolios concentrated in small and mid capitalization stocks tended to outperform portfolios holding large capitalization stocks. Value oriented portfolios outperformed growth style funds in 2002. This could be seen in technology and telecom weighted indexes, such as the growth-related Nasdaq Composite Index, which was down over 31 percent in 2002.

### International Equities

The global stock markets posted negative returns for the third consecutive year, making it the worst downturn in duration and magnitude in the last 60 years. While there was an economic upturn after a global recession, the recovery was muted and below expectations. The weak economic

environment combined with profit warnings, accounting scandals, and fears of war, resulted in another poor year for the global stock markets.

While all equity markets were impacted by general global concerns, Europe was one of the worst performing markets in 2002 due to its particularly weak economies. Eastern equity markets, such as Japan, fared better than their western counterparts due to the region's relative lack of major political or corporate scandals. Despite the climate of investor caution, emerging market regions outperformed and were supported by the attraction of low historical valuation levels.

PERA's international equity return in 2002 was (12.7) percent, compared with (17.8) percent for its custom benchmark [75 percent of the Europe-Australia-Far East (EAFE) Index and 25 percent of the EAFE excluding Japan Index]. PERA's three-year annualized international equity portfolio total return figure was (13.5) percent, ahead of the benchmark's return of (17.0) percent. The five-year annualized total return for PERA's international portfolio was (0.7) percent, compared to the benchmark's total return of (2.8) percent.

### Domestic Fixed Income

The year ending on December 31, 2002, was a very good year for higher-quality fixed income assets. Amidst questionable accounting practices, corporate governance issues, geopolitical concerns, and a weak economy, U.S. Treasuries rallied. Interest rates declined significantly. Emerging markets returned over 13 percent for the year, as investors were attracted to overseas businesses. U.S. Treasuries were the top performing high quality asset class for 2002. Supporting a "flight to quality" theme, U.S. Agencies also performed well. In domestic corporate bonds, lower quality names were severely penalized. Some issuers had difficulty accessing the capital markets.

PERA's domestic fixed income investments returned 9.3 percent in 2002. These investments are compared to a Custom Index that had a return of 9.6 percent. The Lehman Aggregate Index had a return of 10.3 percent. PERA's fixed income underperformance was attributed to lower returns in investment grade corporate bonds. The three-year and five-year annualized total return for domestic fixed income was 9.1 percent and 5.7 percent compared to the Lehman Aggregate Index returns of 10.1 percent and 7.5 percent respectively.

### International Fixed Income

International fixed income returned 18.1 percent compared with the Salomon World Non-U.S. Government Bond Index return of 22.0 percent in 2002. Negatively impacting performance was a portfolio underweight and a short duration position in Japanese Government Bonds, which rallied as the market sold off. International fixed income returned 3.9 percent for the three-year annualized period compared to its benchmark return of 4.6 percent. For the five-year period, international fixed income and its benchmark both had a return of 5.1 percent.

### Alternatives

Private equity markets were negatively impacted in 2002 by falling asset prices, declining public equity markets, and difficult capital markets. Initial public offerings (IPOs), an important source of liquidity for the private markets, hit new lows in 2002. As a result of the challenging

## Investment Section

### Fund Performance Evaluation

*Does not include the 401(k) Voluntary Investment Program*

economic and investment environment, PERA's private equity portfolio declined in value.

Last year, the Colorado PERA Board of Trustees approved PERA's funding of 12 new alternative investments: five in Venture Capital, six in Leveraged Buyouts, and one in International Private Equity totaling \$426 million.

PERA's alternative portfolio returned (12.7) percent in 2002, compared with the Custom Alternatives Benchmark return of (20.2) percent. PERA's alternative portfolio returned (9.4) percent and 4.4 percent for the three- and five-year annualized periods compared with the annualized benchmark returns of (12.7) percent and (0.8) percent for the same periods.

#### Timber

In 2002, the Board approved two new timber investments totaling \$31 million.

PERA's timber portfolio produced one-, three-, and five-year annualized returns of 5.4 percent, 1.9 percent, and 5.1 percent, respectively, compared with the NCREIF Timber Index returns of 1.8 percent, 0.3 percent, and 4.4 percent, respectively, for these periods.

#### Real Estate

Real estate continues to deliver stable returns despite the recent downturn in the economy. Record low interest rates have had a positive effect on real estate values. There has been weakness in occupancy and rental rates, which is related to a slowing of demand rather than over-building or excess supply.

In 2002, the real estate portfolio had a return of 9.4 percent, ahead of its custom benchmark return of 7.1 percent. The real estate portfolio returned 12.2 percent and 10.2 percent for the three- and five-year annualized periods, which compared favorably to the custom benchmark returns of 9.3 percent and 7.3 percent, respectively. The Custom Real Estate Benchmark is comprised of four indices that are weighted according to the real estate asset sector targets prescribed by the Board. Real estate invests in private, public, and international equity, as well as debt.

## Schedule of Investment Results

Does not include 401(k) Voluntary Investment Program

	2002	3-Year	5-Year	10-Year
<b>PERA Total Portfolio</b>	<b>(11.79)%</b>	(6.57)%	2.34%	8.29%
Median Plan (R.V. Kuhn's Median Public Fund Universe)	<b>(8.40)%</b>	(4.00)%	3.40%	8.10%
<b>Domestic Stocks</b>	<b>(20.53)%</b>	(10.44)%	0.13%	8.58%
Standard & Poor's 1500 (S&P 1500)	<b>(21.31)%</b>	(13.19)%	(0.12)%	N/A
Russell 3000	<b>(21.55)%</b>	(13.70)%	(0.72)%	8.93%
<b>International Stocks</b>	<b>(12.72)%</b>	(13.45)%	(0.71)%	4.92%
Europe-Australia-Far East (EAFE) Custom Index <sup>1</sup>	<b>(17.80)%</b>	(17.04)%	(2.82)%	4.80%
<b>Domestic Fixed Income</b>	<b>9.33%</b>	9.07%	5.68%	6.88%
Lehman Brothers Aggregate Bond Index	<b>10.27%</b>	10.10%	7.54%	7.51%
Custom Fixed Income Benchmark <sup>2</sup>	<b>9.58%</b>	9.34%	7.64%	N/A
<b>International Fixed Income</b>	<b>18.09%</b>	3.94%	5.10%	7.58%
Salomon World Non-U.S. Government Bond Index	<b>21.99%</b>	4.64%	5.08%	6.41%
<b>Real Estate (Includes Mortgages)</b>	<b>9.39%</b>	12.22%	10.16%	10.03%
Custom Real Estate Benchmark <sup>3</sup>	<b>7.06%</b>	9.25%	7.32%	7.42%
NCREIF Index	<b>6.75%</b>	8.73%	10.72%	9.26%
<b>Alternative Investments</b>	<b>(12.72)%</b>	(9.35)%	4.35%	13.68%
Custom Alternative Benchmark <sup>4</sup>	<b>(20.21)%</b>	(12.67)%	(0.82)%	8.59%
<b>PERA Timber Investments</b>	<b>5.37%</b>	1.89%	5.05%	10.23%
Timber NCREIF	<b>1.84%</b>	0.26%	4.41%	10.14%

Note: Performance calculations were prepared using time-weighted rates of return. Domestic and International Stocks and Fixed Income were prepared in accordance with the Association For Investment Management and Research Performance Presentation Standards.

<sup>1</sup> 75 percent EAFE and 25 percent EAFE excluding Japan.

<sup>2</sup> 80 percent Lehman Aggregate, 10 percent Lehman High Yield, and 10 percent Lehman Emerging Markets.

<sup>3</sup> 15 percent NAREIT, 45 percent NCREIF, 20 percent Salomon Bros. Mortgage, and 20 percent Global Property Research.

<sup>4</sup> 50 percent S&P Index, 25 percent Russell 2000, 25 percent EAFE excluding Japan.

## Colorado Investment Profile

Does not include 401(k) Voluntary Investment Program

As of December 31, 2002

(In Thousands of Dollars)

Although Colorado in-state investment valuations were down 15.2 percent in 2002 compared to 2001, PERA continues to add high quality Colorado investments to its portfolio.

	Market Value
Commercial mortgages	\$23,660
Committed to future funding	79,460
Common stock of companies headquartered in Colorado	188,761
PERA portion of general partnerships investing in Colorado companies <sup>1</sup>	50,325
Bonds and notes	56,469
Real estate equity	137,296
Funds under management of Colorado companies <sup>2</sup>	409,875
<b>Total</b>	<b>\$945,846</b>

<sup>1</sup> General Partners based outside of Colorado.

<sup>2</sup> Venture capital partnerships and equity managers domiciled in Colorado.

## Investment Section

### Largest Stock Holdings (Market Value)

As of December 31, 2002

(In Thousands of Dollars)

	Shares	Market Value
Microsoft Corp	6,000,180	\$310,209
General Electric Co	10,216,115	248,762
Pfizer Inc	7,271,371	222,286
Citigroup Inc	5,501,932	193,613
Exxon Mobil Corp	5,074,900	177,317
Johnson & Johnson	3,144,650	168,899
Wal-Mart Stores Inc	3,318,300	167,607
American International Group Inc	2,600,600	150,445
Merck & Co Inc	2,293,100	129,812
Procter & Gamble Co	1,380,100	\$118,606

A complete list of holdings is available upon request.

### Largest Bond Holdings (Market Value)

As of December 31, 2002

(In Thousands of Dollars)

	Par Value	Market Value
U.S. Treasury Notes, 7.00%; Due 7-15-2006	\$56,000	\$64,925
U.S. Treasury Notes, 5.625%; Due 5-15-2008	50,000	56,739
Germany (Fed Rep), 6.50%; Due 7-15-2003	51,840	52,822
U.S. Treasury Notes, 6.50%; Due 2-15-2010	30,000	35,864
Sweden (Kingdom of), 5.50%; Due 10-8-2012	33,179	35,238
CMO DLJ Commercial Mortgage Corp COML, 7.30%; Due 6-10-2032	25,000	29,217
Germany (Fed Rep), 5.00%; Due 8-19-2005	25,931	27,271
Germany (Fed Rep), 3.25%; Due 2-17-2004	26,865	27,050
Canada (Govt of), 3.50%; Due 6-1-2004	26,712	26,917
FHLMC Gold Group, 6.50%; Due 07-1-2029	\$25,758	\$26,832

A complete list of holdings is available upon request.

## PERA's 401(k) Voluntary Investment Program Report on Investment Activity

(In Thousands of Dollars)

The Colorado PERA 401(k) Voluntary Investment Program (401(k) Plan) was established on July 1, 1985, under Section 401(k) of the Internal Revenue Code. Plan participation is voluntary and contributions are entirely separate from those that members make to the defined benefit plan each month. This section includes information about the 401(k) Plan; however, a separate 401(k) Plan Annual Report is published and mailed to all Plan participants.

In 2002, participants were able to make tax-deferred contributions of up to 100 percent of their annual gross salary less the PERA 8 percent deduction, up to a maximum of \$11,000 (actual dollars). Participants age 50 or older in 2002 could contribute an additional \$1,000 (actual dollars) as catch-up contributions. Contributions to the 401(k) Plan are deducted from the participant's monthly salary, and earnings on 401(k) Plan investments are also tax-deferred. In the 2002 calendar year, the PERA "MatchMaker" Program provided an employer match on members' voluntary contributions to tax-deferred defined contribution (DC) plans. The MatchMaker Program, which was initiated by the PERA Board of Trustees and authorized in Senate Bill 99-90, is contingent on any overfunding in the PERA retirement trust funds. The legislation allows PERA to direct PERA-affiliated employers to reduce a portion of their employer contributions normally sent to PERA to match members' voluntary contributions to 401(k), 457, 403(b), and 401(a) tax-deferred retirement plans. The amount of the maximum contribution match may change from year-to-year, and if PERA is not fully funded, matching dollars may not be paid in the following year.

The match set by the Board for the 2002 calendar year was a 100 percent match of members' voluntary contributions to eligible DC plans, up to a maximum of 3 percent of PERA-includable salary per payroll for State and School and Municipal Division members, and 7 percent for Judicial Division members. In 2002, the Board set Matchmaker amounts for the 2003 calendar year. The 2003 Matchmaker amounts are as follows: 2 percent for State and School and Municipal Division members and 6 percent for Judicial Division members.

An administrative fee pays for recordkeeping, communications, education, consulting, staff, and other overhead expenses. In 2002, the fee equaled \$1 (actual dollars) per month per person for the first 12 months of participation in the Plan, then \$1.50 (actual dollars) per month thereafter. Expenses are also offset by a partial return of investment management fees by each fund.

On December 31, 2002, the 401(k) Plan had net assets of \$737,849 and 70,664 accounts, a net increase of 9 percent in the total Plan value in one year, and 9 percent in membership. During the year, \$99,838 was withdrawn from plan accounts of which \$81,831 was transferred to purchase PERA service credit.

During 2002, participant contributions totaled \$179,155 including \$16,814 received as rollovers. In addition, PERA-affiliated employers contributed \$68,209 consisting of \$66,390 in employer matching

contributions funded by the PERA MatchMaker program, \$878 in employer matching contributions funded by the employer, and \$941 in employer discretionary contributions.

As a result of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), the 401(k) Plan has accepted tax-paid and tax-deferred rollovers from 403(b) Deferred Compensation plans in addition to money from 401(a) and 401(k) plans. Tax-deferred rollovers from IRAs are also accepted in the Plan. There was \$13,932 loaned from the 401(k) Plan in 2002 in 3,374 loan agreements.

	Year-End Statistics	
	Assets	Number of Accounts
1993	\$60,711	6,019
1994	78,687	8,080
1995	125,692	10,155
1996	186,541	13,064
1997	272,053	16,391
1998	362,874	20,112
1999	514,115	24,224
2000	557,670	35,162
2001	674,618	64,632
<b>2002</b>	<b>\$737,849</b>	<b>70,664</b>

### 2002 Activities

Effective January 1, 2002, six "Freedom" funds provided by Fidelity allow 401(k) Plan participants to choose an investment option that is based on their target retirement date, acceptable level of risk, and time horizon goals.

Also in 2002, the Board of Trustees approved a new 401(k) Investment Policy that provides for the Plan to have funds in nine investment categories. The investment categories and corresponding funds within PERA's 401(k) are outlined below.

#### Short-Term Investment Category

The Short-Term Investment Category provides competitive, short-term investment returns while maintaining very stable principal values. Typically, maturities are from overnight to 12 months. The fund in this category is the Northern Trust Short Term Fund.

#### Short-Term Bond Category

The Short-Term Bond Category provides the potential for additional return beyond that achieved by the Short-Term Investment Category with some incremental risk. Investments should typically have maturities from one year to four years. The fund in this category is the PIMCO Low Duration Fund.

#### Long-Term Bond Category

The Long-Term Bond Category provides participation in the fixed income markets. The fixed income market provides income and capital appreciation/depreciation returns with interest rate and credit risks. Investments should typically have maturities of five years or longer. The fund in this category is the PIMCO Total Return Fund.

#### Growth Domestic Equity Category

The Growth Domestic Equity Category seeks to provide capital appreciation with stock portfolios that have a very low dividend yield and which have higher than average valuation characteristics. Funds in this category include the Janus Fund and the Janus Enterprise Fund.

## Investment Section

### PERA's 401(k) Voluntary Investment Program Report on Investment Activity

(In Thousands of Dollars)

#### Value Domestic Equity Category

The Value Domestic Equity Category seeks to provide capital appreciation with stock portfolios which have a higher emphasis on dividend yield and which have lower than average valuation characteristics. The fund in this category is the Morgan Stanley Institutional Mid Cap Value Fund.

#### Core Domestic Equity Category

The Core Domestic Equity Category seeks to provide capital appreciation with stock portfolios that have an average dividend yield and a blend of growth and value styles. Fund choices in this category include the Fidelity Contrafund, the PERA Growth and Income Stock Fund, and the Vanguard S&P 500 Index Fund.

#### Balanced Category

The Balanced Category provides a blended return/risk profile between bonds and stocks and limited active asset allocation. The fund choice in this category is the Dodge & Cox Balanced Fund.

#### International Stock Category

The International Stock Category seeks to provide the return, risk, and diversification available from investing in a diversified portfolio of the stocks of non-U.S. companies. The fund choice in this category is the American Funds EuroPacific Growth Fund.

#### Asset Allocation or Lifestyle Category

This category is designed for investors who do not wish to actively manage their portfolios. Lifestyle funds seek to achieve long-term growth over a specified time period by adjusting assets among stocks, bonds, and money market instruments or by investing in different kinds of mutual funds. Choices in this category include six Fidelity Freedom Funds.

#### Economic Update

The U.S. economy remained soft throughout 2002. As corporate scandals eroded investor confidence and concerns mounted about a war with Iraq, unemployment increased and capital and consumer spending decreased. To maintain economic growth, the Federal Open Market Committee decreased the federal funds rate target in November by 50 basis points to 1.25 percent—its lowest level in 47 years.

The stock market endured a third consecutive year of losses. The Dow Jones Industrial Average, Standard & Poor's 500, and Nasdaq Composite indices plunged 15.0 percent, 22.1 percent, and 31.2 percent, respectively, marking the indices' highest losses since the early 1970s. No sector of the S&P 500 managed to post a positive return in 2002. Growth and value stocks, as well as large and small capitalization stocks, ended the year with double-digit losses. International equity markets experienced a bear market for the third consecutive year, as the world's largest economies grew slowly and stock prices fell in most of the developed markets.

Prolonged stock market volatility and continued global economic and political unease resulted in U.S. Treasuries and very high quality corporate bonds enjoying solid gains for the year. Government bonds performed better than corporates in the long-term segment of the market, and short-term corporates outperformed short-term Treasuries.

- The Standard & Poor's 500 Index lost 22.1 percent.
- The technology-dominated Nasdaq Composite Index fell 31.2 percent.
- The Russell 2000 Index of small capitalization stocks declined 20.5 percent.
- The EAFE custom benchmark [75 percent of the Europe-Australia-Far East (EAFE) Index and 25 percent of the EAFE excluding Japan Index] lost 17.8 percent.
- The Lehman Brothers Aggregate Bond Index returned 10.3 percent.

#### Investment Options

The Plan assets are invested in one or more of the following types of investments. Among the specific investment funds designated by the Board, some variety is provided with respect to the expected risk and the expected potential for earnings and appreciation.

*Northern Trust Short Term Fund:* Primarily invests in high-grade money market instruments with short maturities such as U.S. government obligations, commercial paper, and certificates of deposit. Managed by The Northern Trust Company.

*PIMCO Low Duration Fund:* Primarily invests in domestic corporate and government fixed income securities of varying maturities with a portfolio duration ranging between one and three years, and some foreign securities. Managed by PIMCO.

*PIMCO Total Return Fund:* Primarily invests in U.S. government and corporate securities based on an analysis of major changes in the direction of long-term interest rates. Managed by PIMCO.

*Dodge & Cox Balanced Fund:* The fund is a combination of common stocks and fixed income securities (primarily high quality bonds), with no more than 75 percent of the assets in stocks. Managed by Dodge & Cox.

*PERA Growth & Income Stock Fund:* Primarily invests in common stocks of high-quality companies with a broad range of capitalization. Managed by PERA investment staff.

*Fidelity Contrafund:* Primarily invests in common stocks and securities convertible into common stocks of companies with high growth potential. Managed by Fidelity Investments.

*American Funds EuroPacific Growth Fund:* Primarily invests in equity securities of issuers domiciled in Europe or the Pacific Basin. May also invest in securities through depository receipts, securities convertible into common stocks, straight debt securities, government securities, or non-convertible preferred stocks. Managed by The American Funds Group.

*Vanguard S&P 500 Index Fund:* The fund employs a passive management strategy designed to track the performance of the Standard & Poor's 500 Index, which is dominated by the stocks of large U.S. companies. The fund attempts to replicate the target index by investing all or substantially all of its assets in the stocks that make up the index. Managed by Vanguard.

**PERA's 401(k) Voluntary Investment Program Report on Investment Activity**  
*(In Thousands of Dollars)*

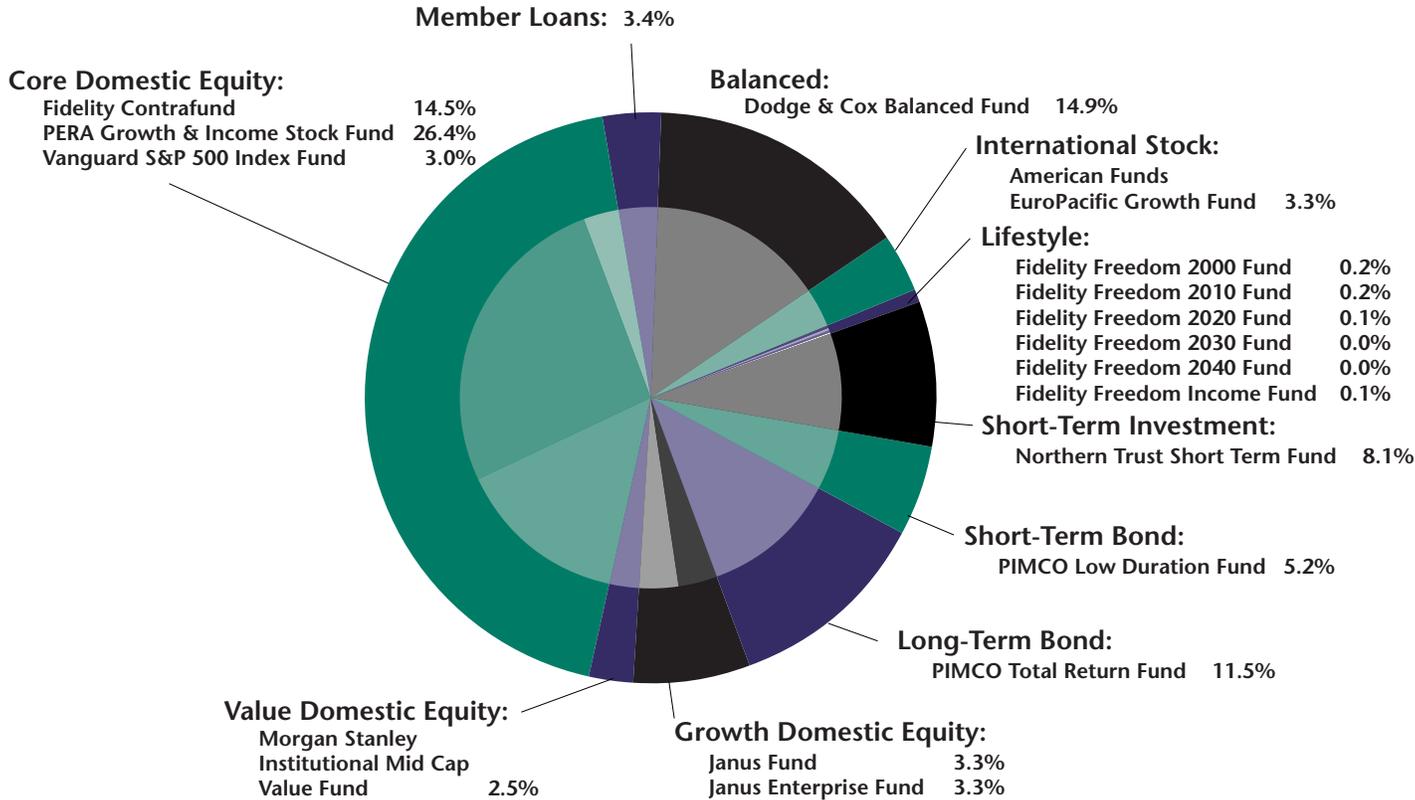
*Janus Fund:* The fund invests primarily in common stocks selected for their growth potential. Although the fund can invest in companies of any size, it generally invests in larger, more established companies. Managed by Janus Funds.

*Morgan Stanley Institutional Mid Cap Value Fund:* The fund invests in equity securities of medium-sized companies that demonstrate attractive valuation characteristics. Managed by Morgan Stanley.

*Janus Enterprise Fund:* The fund invests primarily in common stocks selected for their growth potential, and normally invests at least 50 percent of its equity assets in medium-sized companies. Managed by Janus Funds.

*Fidelity Freedom Funds:* Six funds with varying asset and risk levels based on the retirement dates of participants that are designed for those who do not wish to actively manage their portfolios. Managed by Fidelity Investments.

**Asset Allocation by 401(k) Voluntary Investment Program Investment Funds**  
*As of December 31, 2002*



## Investment Section

### 401(k) Voluntary Investment Program Schedule of Investment Results

	Annualized Returns				
	2002	2001	3-Year	5-Year	10-Year
Northern Trust Short Term Fund <sup>2</sup>	1.8%	4.1%	4.1%	4.8%	4.8%
PIMCO Low Duration Fund <sup>1</sup>	7.5%	7.9%	7.7%	6.6%	6.8% <sup>4</sup>
PIMCO Total Return Fund	10.0%	9.4%	11.0%	8.0% <sup>4</sup>	8.3% <sup>4</sup>
Dodge & Cox Balanced Fund <sup>1</sup>	(3.0%)	10.1%	7.2%	8.1%	12.0% <sup>4</sup>
PERA Growth & Income Stock Fund	(19.6%)	(14.2%)	(12.2%)	1.3%	11.3%
Vanguard S&P 500 Index Fund <sup>3</sup>	(22.1%)	(12.0%)	(14.6%) <sup>4</sup>	(0.6%) <sup>4</sup>	9.2% <sup>4</sup>
Janus Fund <sup>3</sup>	(27.6%)	(26.1%)	(23.1%) <sup>4</sup>	(1.4%) <sup>4</sup>	6.9% <sup>4</sup>
Fidelity Contrafund <sup>1</sup>	(9.6%)	(12.6%)	(9.6%)	4.0%	11.5% <sup>4</sup>
Morgan Stanley Inst Mid Cap Value <sup>3</sup>	(28.8%)	(3.4%)	(8.2%) <sup>4</sup>	1.5% <sup>4</sup>	N/A
Janus Enterprise Fund <sup>3</sup>	(28.3%)	(39.9%)	(33.1%) <sup>4</sup>	(2.3%) <sup>4</sup>	5.8%
American Funds EuroPacific Growth Fund <sup>2</sup>	(13.6%)	(12.2%)	(14.6%)	2.5%	8.5% <sup>4</sup>
Fidelity Freedom 2000 <sup>5</sup>	(1.8%)	N/A	0.7% <sup>4</sup>	5.7% <sup>4</sup>	N/A
Fidelity Freedom 2010 <sup>5</sup>	(6.4%)	N/A	(3.6%) <sup>4</sup>	5.0% <sup>4</sup>	N/A
Fidelity Freedom 2020 <sup>5</sup>	(12.8%)	N/A	(8.7%) <sup>4</sup>	3.0% <sup>4</sup>	N/A
Fidelity Freedom 2030 <sup>5</sup>	(16.1%)	N/A	(11.5%) <sup>4</sup>	1.7% <sup>4</sup>	N/A
Fidelity Freedom 2040 <sup>5</sup>	(18.3%)	N/A	N/A	N/A	N/A
Fidelity Freedom Income <sup>5</sup>	(0.3%)	N/A	2.7% <sup>4</sup>	5.2% <sup>4</sup>	N/A

<sup>1</sup> This fund joined PERA's 401(k) Plan in April 1994.

<sup>2</sup> This fund joined PERA's 401(k) Plan in January 1997.

<sup>3</sup> This fund joined PERA's 401(k) Plan in April 2000.

<sup>4</sup> This fund's return is gross of fees.

<sup>5</sup> This fund joined PERA's 401(k) Plan in January 2002.

### 401(k) Voluntary Investment Program Summary

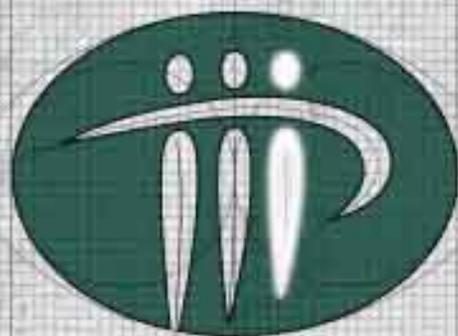
(In Thousands of Dollars)

	Market Value	Percent of Total Market Value		
	December 31, 2002	2002	2000	1998
Northern Trust Short Term Fund	\$59,074	8.1%	3.3%	1.9%
PIMCO Low Duration Fund	37,518	5.2%	2.9%	4.7%
PIMCO Total Return Fund	84,068	11.5%	5.2%	7.9%
Dodge & Cox Balanced Fund	108,670	14.9%	11.0%	12.4%
PERA Growth & Income Stock Fund	191,896	26.4%	43.4%	44.4%
Vanguard S&P 500 Index Fund <sup>1</sup>	21,601	3.0%	0.9%	N/A
Janus Fund <sup>1</sup>	24,172	3.3%	1.9%	N/A
Fidelity Contrafund	105,545	14.5%	21.0%	24.3%
Morgan Stanley Inst Mid Cap Value <sup>1</sup>	18,227	2.5%	0.9%	N/A
Janus Enterprise Fund <sup>1</sup>	24,218	3.3%	2.9%	N/A
American Funds EuroPacific Growth Fund	24,293	3.3%	3.7%	2.1%
Fidelity Freedom 2000	1,582	0.2%	N/A	N/A
Fidelity Freedom 2010	1,586	0.2%	N/A	N/A
Fidelity Freedom 2020	858	0.1%	N/A	N/A
Fidelity Freedom 2030	327	0.0%	N/A	N/A
Fidelity Freedom 2040	221	0.0%	N/A	N/A
Fidelity Freedom Income	717	0.1%	N/A	N/A
Member Loans	\$24,367	3.4%	2.9%	2.3%

<sup>1</sup> This fund joined PERA's 401(k) Plan in April 2000.



## ***Actuarial Section***



# **COLORADO PERA**

*The third figure represents the employers and many entities in Colorado that are concerned with the welfare of their employees after retirement. These employers are aware of the value of benefits that Colorado PERA provides. And, by their contributions, they reward their employees for the years of service to the public in the state of Colorado.*





**GABRIEL, ROEDER, SMITH & COMPANY**

Consultants & Actuaries

5605 N. MacArthur Blvd. • Suite 870 • Irving, Texas 75038-2631 • 469-524-0000 • fax 469-524-0003

June 3, 2003

Board of Trustees  
Public Employees' Retirement Association of Colorado  
1300 Logan Street  
Denver, Colorado 80203

Dear Members of the Board:

PERA's basic financial goal is to establish contributions which, as a percentage of payroll, remain level for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

The most recent valuations are based on the plan provisions and assumptions in effect on December 31, 2002. PERA provided the participant data and the asset information. Gabriel, Roeder, Smith & Company reviewed the data for reasonableness. No material changes in the plan provisions have occurred since the prior valuation.

No change in the actuarial assumptions used in the valuations occurred since the prior valuation. These assumptions are based on an experience investigation performed as of December 31, 2000. The assumptions were adopted by the Board in July 2001. In our opinion, the assumptions are internally consistent and produce results which are reasonable in the aggregate. We also believe the assumptions and actuarial methods meet the requirements of Governmental Accounting Standards Board Statement No. 25.

Gabriel, Roeder, Smith & Company updated the following schedules for the December 31, 2002 CAFR:

Financial Section

Schedule Of Funding Progress for the Years Ended December 31  
Schedule of Employer Contributions for the Years Ended December 31  
(Annual Required Contribution and % ARC Contributed Only)  
Notes to Required Supplementary Information

## Report of the Independent Actuary

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June 3, 2003  
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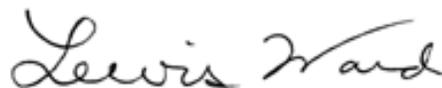
We certify that this valuation was performed in accordance with standards of practice and by qualified actuaries as prescribed by the Actuarial Standards Board. Both of the consultants listed below have experience in performing valuations for large statewide public retirement systems.

It is our opinion that PERA continues to have a relatively good funded ratio of 88% (based on the actuarial value of assets). However, the contribution rates are not currently sufficient to support the current benefit structures of the System. If there is not a significant recovery in the investment markets in the near future, the long term ability of the System to support the benefits will be challenged in the absence of a significant increase in the contribution rates.

Sincerely,



W. Michael Carter, FSA, MAAA  
Senior Consultant



Lewis Ward  
Consultant

nib

0057/2003/valuation/cafrltr02.doc

### The Plan Summary for Calendar Year 2002

The Colorado Public Employees' Retirement Association was established in 1931 by the Colorado General Assembly as an instrumentality of the state. It initially covered only state employees, but membership has expanded to include all school districts except Denver, numerous municipalities, special districts, public health departments and other local government entities, as well as the State's judicial system.

The Plan's purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability. The Plan is funded on an actuarial reserve basis, with money being set aside for benefits while the benefits are being earned and before they are paid.

#### Administration of the Plan

The Plan operates by the authority of the Colorado General Assembly, with benefits and administration defined under Title 24, Article 51, of the Colorado Revised Statutes. Colorado PERA is governed by a 16-member Board of Trustees, 14 of whom are elected by the membership to four-year terms and serve without compensation except for necessary expenses. The State Auditor and the State Treasurer serve as ex-officio members.

The Board appoints an Executive Director who is responsible for the daily administration of the Association. The Board retains an actuary to make annual valuations of the funding adequacy of the liabilities accrued under the Plan. The Board also retains other consultants as necessary.

#### Member Contributions

All members except State Troopers contribute 8 percent of their gross salary to a member contribution account. State Troopers contribute 10 percent of salary. Generally, salary is compensation for services rendered and is specifically defined in state law.

Member contributions have been tax-deferred for federal income tax purposes since July 1, 1984, and for state income tax purposes since January 1, 1987. Therefore, contributions are not considered as income for federal or state income tax purposes until they are withdrawn through a refund or a benefit.

#### Employer Contributions

PERA-affiliated employers contribute a percentage of their total payroll to the Fund. Respective employer contribution rates are shown on the "Schedule of Contribution Rate History" on page 71.

The "Schedule of Computed Employer Contribution Rates" on page 70 shows a detailed explanation of how the employer contributions are determined. These contributions are credited to the respective Division for the purpose of creating actuarial reserves, so each member's benefits are fully provided for at retirement. PERA is exempt from federal income taxes under the Internal Revenue Code.

#### Termination

A member who terminates PERA-covered employment may request a member contribution account refund or leave the account with PERA; a refund cancels a former PERA member's rights to future PERA benefits.

A member who has not attained age 65 or is not eligible to retire receives, in addition to his or her account, a matching amount equal to 50 percent of the member contributions and interest. A member who withdraws his

or her account upon or after reaching age 65 or retirement eligibility receives a 100 percent matching amount.

Member contribution accounts accrue interest at a rate set by state law as 80 percent of PERA's actuarial investment assumption rate. The accrued rate used to credit interest to member contribution accounts in 2002 was 7.0 percent.

Any member who leaves a member account with PERA until reaching age 65 or meeting PERA's age and service requirements may apply for lifetime monthly benefits instead of withdrawing their account.

#### Retirement Benefits

Members are eligible to receive monthly retirement benefits when they reach age 65 or meet PERA's age and service retirement eligibility requirements. Retirement benefits are equal to the higher of a defined service retirement benefit or a money purchase retirement benefit. However, members who apply for a monthly retirement benefit at age 65 with less than five years of service or 60 months on the payroll are eligible for a money purchase retirement benefit only.

#### Defined Retirement Benefits

Defined service retirement benefits are based on the member's years of service, age, and Highest Average Salary (HAS). HAS is one-twelfth of the average of highest annual salaries on which PERA contributions were paid that are associated with three periods of 12 consecutive months of service credit. A 15 percent annual limit in salary increases applies if any salary used in the HAS calculation is from the three years prior to retirement. A one-year HAS applies for judges.

Defined retirement benefits equal 2.5 percent of HAS for each year of service credit up to a maximum of 100 percent of HAS.

Unreduced service retirement benefits are available to members whose age plus years of service total 80 or more, if the members are at least age 55 with a minimum of five years of service credit. Service retirement benefits are also available at age 50 with 30 years of service or at age 65 with five years of service. House Bill 00-1458 allows certain members eligible for retirement to convert sick leave over 45 days or 360 hours into salary for PERA purposes for PERA contributions and benefits, if permitted by their employer or under this legislation. This provision is effective through June 30, 2005.

Reduced defined service retirement benefits available to members at age 60 with five years of service are reduced 4 percent per year (0.333 percent per month) before the eligible date for service retirement. Members who retire at age 55 with 20 years of service receive reduced defined service retirement benefits; the reduction factor equals 3 percent per year (0.25 percent per month).

Members also are eligible for reduced service retirement benefits at age 50 with 25 years of service. Benefits for members retiring under age 55 are reduced 6 percent for each year that members retire before they would have become eligible for service retirement benefits.

Retirement benefits for State Troopers and members of the Judicial Division differ slightly.

## The Plan Summary for Calendar Year 2002

### Money Purchase Retirement Benefit

A money purchase benefit is also calculated and paid to the retiree if it is higher than the defined service retirement benefit. This benefit is determined by the member's life expectancy and the value of the member's contribution account, plus the matching amount equal to 100 percent of the member's contributions and interest.

### Survivor Benefits

The benefit amount that qualified survivors receive is determined by which survivors are eligible to receive benefits and the member's HAS. The order in which qualified survivors receive benefits depends on whether or not the member is eligible for retirement at the time of the member's death.

If a member dies with less than one year of PERA service credit, or with no survivors qualified to receive a monthly benefit, the named beneficiary or the estate will receive a lump-sum payment of the member's contribution account plus a matching amount equal to 100 percent of the member's contributions and earned interest.

If a member had more than one year of service and qualified survivors at the time of death, a monthly benefit may be payable to qualified survivors. If the member's death was job-incurred, the service credit minimum is waived. If the member is not eligible for retirement, children receive a benefit first, but if the member is eligible for retirement, the cobeneficiary receives the benefit first.

Children are eligible to receive survivor benefits if under age 18, or if enrolled full-time in an accredited school within six months of the member's death, until they reach age 23. If there are no eligible children, or after benefits to children have ceased, the member's surviving spouse receives a monthly benefit at age 60 if the member had less than 10 years of service credit or immediately if the member had more than 10 years of service at the time of death. If there is no eligible spouse, financially dependent parents will receive a survivor benefit.

### Disability Benefits

PERA provides a two-tiered disability program. Short-term disability payments are provided to members who are mentally or physically incapacitated from performance of essential job duties with reasonable accommodation, but who are not totally and permanently incapacitated from regular and substantial gainful employment. PERA provides reasonable income replacement, or rehabilitation or retraining services. Disability retirement benefits are provided to members who are totally and permanently mentally or physically incapacitated from regular and substantial gainful employment.

### Annual Benefit Increases

Each March, benefits are increased 3.5 percent, compounded annually. The first annual increase occurs in the March that immediately follows the calendar year in which the member retired. If the member has not been retired for a full year, the benefit is increased proportionately.

### MatchMaker Program

In the 2002 calendar year, the PERA "MatchMaker" program provided an employer match on members' voluntary contributions to tax-deferred defined contribution (DC) plans. The MatchMaker program, which was initiated by the PERA Board of Trustees and authorized in Senate Bill 99-90, is contingent on any overfunding in the PERA retirement trust funds. SB 90 allows PERA to direct affiliated employers to reduce a portion of their employer contributions normally sent to PERA to match members' voluntary contributions to 401(k), 457, 403(b), and 401(a) tax-deferred retirement plans.

The match set by the Board for the 2002 calendar year was a 100 percent match of members' voluntary contributions to eligible DC plans, up to a maximum of 3 percent of PERA-includable salary for State and School Division members, 3 percent of salary for Municipal Division members, and 7 percent of PERA-includable salary for Judicial Division members per pay period.

### Summary of Actuarial Methods and Assumptions

#### Actuarial Methods

The cost that a retirement plan such as Colorado PERA incurs equals benefits paid plus administration and financing expenses. These costs are paid through contributions to the Plan and investment earnings on the Plan's assets.

Using the Plan's schedule of benefits, the member data, and a carefully selected set of actuarial assumptions, the Plan's actuary estimates the cost of the benefits that will be paid. Then, using a particular actuarial funding method, the actuary allocates these costs and determines a systematic manner to fund for future plan benefits. For PERA (as well as most public sector plans), the objective is to fund in a manner that keeps contribution rates approximately level from generation to generation. The funding method best designed to keep annual costs level as a percent of pay is the "Entry Age Actuarial Cost Method." This method is described below.

##### *Entry Age Actuarial Cost Method*

Under the Entry Age Actuarial Cost Method, projected service retirement, termination, disability, and death benefits are determined for all active members. Cost factors, which are developed to produce level annual costs in each year from the age at hire (entry age) to the assumed retirement age, are applied to the projected benefits to determine what the "normal cost" should be. The normal cost is the portion of the total cost of the Plan allocated to the current year. The "actuarial accrued liability" for active members is then calculated as the portion of the total cost of the Plan allocated to prior years.

The actuarial accrued liability for members currently receiving benefits, for active members beyond the assumed retirement age, and for inactive members entitled to future benefits, is equal to the present value of the benefits expected to be paid. No normal costs are now payable for these participants.

The excess of the total actuarial accrued liability over the value of the Plan assets is called the "unfunded actuarial accrued liability." Funding requirements under the Entry Age Actuarial Cost Method are determined by adding the normal cost and the cost to amortize the unfunded liability. Under Colorado state law, the amortization period cannot exceed 40 years.

The actuarial assumptions are used to determine the projected benefits and cost factors. The effect of differences between these assumptions and the actual experience of the Plan is calculated each year when the annual actuarial valuation is performed. These differences produce either actuarial gains or losses that result in an adjustment of the unfunded liability.

##### *Asset Valuation Method*

In 1992, the PERA Board of Trustees adopted a method for valuing assets that recognizes a "smoothed" market value of those assets. The smoothed value of assets recognizes the difference between actual and expected asset performance for each year in equal amounts over a four-year period.

#### Actuarial Assumptions

Colorado PERA's actuarial assumptions are used to project the Plan's future experience. Every five years, the actuarial assumptions are studied and an actuarial review is performed by an external actuarial consulting firm to verify the following:

- Accuracy of membership data, financial data, actuarial and benefit calculations, and employer contributions.
- Consistency of calculations with respect to statutory requirements.
- Consistency and reasonableness of assumptions and methods.
- Valuation of all significant benefits.
- A review of the valuation report content.

The most recent five-year experience study was completed in 2001 by Watson Wyatt, who served as the independent retained actuary throughout 2001. This study compared actual to expected results on all PERA actuarial assumptions for the 1996–2000 period. The most recent review of actuarial valuation and processes was conducted in 2001 by Gabriel, Roeder, Smith & Company (GRS) before GRS acquired Watson Wyatt's U.S.-based public sector retirement practice and became PERA's independent retained actuary.

Watson Wyatt's experience study recommended new assumptions for PERA, which were reviewed by GRS, adopted by the Board, and first used in the December 31, 2001, valuation. The new assumptions recognized longer life expectancies, increased rates of retirement by members eligible to retire, and made other changes.

##### *Economic Assumptions*

The investment return rate used in the 2002 valuations was 8.75 percent per year compounded annually, net after administrative expenses. The real rate of return is the portion of the total investment return in excess of the inflation rate. Considering other financial assumptions, the 8.75 percent investment return translates into an assumed real rate of return of 4.25 percent.

The overall member payroll was assumed to increase 5.5 percent annually in 2001. Pay increase assumptions for individual members in 2002 are shown for sample ages in Exhibits A, B, and C. At each age, 4.5 percent of the increase is attributable to the assumed inflation rate, and the remainder is for merit and seniority increases. Judicial Division pay increases (Exhibit C) are determined by the State Legislature. Benefits are assumed to increase at a rate of 3.5 percent after payments begin.

##### *Non-Economic Assumptions*

The mortality table (Colorado Projected Experience Table) is based on Colorado PERA experience. The table is used to estimate the value of benefits expected to be paid. Related values are shown in Exhibit E. For disability retirement, benefit values are based on a separate mortality table with higher rates of mortality to reflect the impaired longevity for disabled retirees.

The probabilities of age and service retirement are shown in Exhibit F. The probabilities of withdrawal from service, disability, and death-in-service are shown for sample ages in Exhibits A, B, C, and D. It is assumed that 35 percent of the vested members who terminate will elect to withdraw their accounts while the remaining 65 percent will elect to leave their accounts in the Plan to be eligible for a benefit at their retirement date.

**Separations from Employment Before Retirement and Individual Pay Increase Assumptions**

**Exhibit A—State and School Division**

Sample Ages	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Ultimate Withdrawal <sup>1</sup>		Death		Disability		Merit & Seniority	Base (Economy)	Increase (Next Year)
	Men	Women	Men	Women	Men	Women			
<b>State Members Other Than State Troopers</b>									
20 .....	21.00%	18.00%	0.025%	0.015%	0.01%	0.01%	4.95%	4.50%	9.45%
25 .....	8.50%	10.25%	0.030%	0.015%	0.04%	0.03%	4.45%	4.50%	8.95%
30 .....	5.00%	6.70%	0.040%	0.025%	0.05%	0.05%	3.60%	4.50%	8.10%
35 .....	3.52%	4.93%	0.055%	0.035%	0.18%	0.16%	2.80%	4.50%	7.30%
40 .....	2.81%	3.63%	0.095%	0.058%	0.24%	0.22%	2.10%	4.50%	6.60%
45 .....	2.49%	3.12%	0.210%	0.102%	0.39%	0.34%	1.40%	4.50%	5.90%
50 .....	2.39%	2.97%	0.425%	0.176%	0.75%	0.66%	0.75%	4.50%	5.25%
55 .....	2.39%	2.89%	0.598%	0.252%	1.01%	0.90%	0.35%	4.50%	4.85%
60 .....	2.39%	2.84%	0.755%	0.383%	1.08%	0.96%	0.00%	4.50%	4.50%
65 .....	2.39%	2.84%	1.179%	0.670%	1.08%	0.96%	0.00%	4.50%	4.50%
<b>State Troopers</b>									
20 .....	6.00%	6.00%	0.025%	0.015%	0.02%	0.02%	5.50%	4.50%	10.00%
25 .....	6.00%	6.00%	0.030%	0.015%	0.08%	0.08%	4.20%	4.50%	8.70%
30 .....	5.10%	5.10%	0.040%	0.025%	0.12%	0.12%	3.20%	4.50%	7.70%
35 .....	2.70%	2.70%	0.055%	0.035%	0.40%	0.40%	2.50%	4.50%	7.00%
40 .....	1.60%	1.60%	0.095%	0.058%	0.54%	0.54%	1.90%	4.50%	6.40%
45 .....	1.10%	1.10%	0.210%	0.102%	0.86%	0.86%	1.50%	4.50%	6.00%
50 .....	1.00%	1.00%	0.425%	0.176%	1.66%	1.66%	1.30%	4.50%	5.80%
55 .....	1.00%	1.00%	0.598%	0.252%	2.24%	2.24%	1.10%	4.50%	5.60%
60 .....	1.00%	1.00%	0.755%	0.383%	2.40%	2.40%	0.90%	4.50%	5.40%
65 .....	1.00%	1.00%	1.179%	0.670%	2.40%	2.40%	0.50%	4.50%	5.00%
<b>School Members</b>									
20 .....	21.00%	18.00%	0.025%	0.015%	0.01%	0.01%	4.95%	4.50%	9.45%
25 .....	8.50%	10.25%	0.030%	0.015%	0.01%	0.02%	4.45%	4.50%	8.95%
30 .....	5.00%	6.70%	0.040%	0.025%	0.01%	0.03%	3.60%	4.50%	8.10%
35 .....	3.52%	4.93%	0.055%	0.035%	0.04%	0.05%	2.80%	4.50%	7.30%
40 .....	2.81%	3.63%	0.095%	0.058%	0.11%	0.08%	2.10%	4.50%	6.60%
45 .....	2.49%	3.12%	0.210%	0.102%	0.18%	0.10%	1.40%	4.50%	5.90%
50 .....	2.39%	2.97%	0.425%	0.176%	0.40%	0.30%	0.75%	4.50%	5.25%
55 .....	2.39%	2.89%	0.598%	0.252%	0.65%	0.50%	0.35%	4.50%	4.85%
60 .....	2.39%	2.84%	0.755%	0.383%	0.80%	0.50%	0.00%	4.50%	4.50%
65 .....	2.39%	2.84%	1.179%	0.670%	0.80%	0.50%	0.00%	4.50%	4.50%

<sup>1</sup> The assumed rate is the greater of the select rates as shown in Exhibit D or the ultimate rate shown above at the appropriate age.

## Actuarial Section

# Separations from Employment Before Retirement and Individual Pay Increase Assumptions

### Exhibit B—Municipal Division

Sample Ages	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Ultimate Withdrawal <sup>1</sup>		Death		Disability		Merit & Seniority	Base (Economy)	Increase (Next Year)
	Men	Women	Men	Women	Men	Women			
20.....	12.00%	15.00%	0.025%	0.015%	0.01%	0.01%	8.40%	4.50%	12.90%
25.....	7.00%	10.30%	0.030%	0.015%	0.04%	0.04%	6.00%	4.50%	10.50%
30.....	5.06%	7.63%	0.040%	0.025%	0.07%	0.05%	4.40%	4.50%	8.90%
35.....	3.77%	6.29%	0.055%	0.035%	0.22%	0.18%	3.20%	4.50%	7.70%
40.....	2.97%	4.80%	0.095%	0.058%	0.30%	0.24%	2.40%	4.50%	6.90%
45.....	2.62%	4.12%	0.210%	0.102%	0.47%	0.39%	1.90%	4.50%	6.40%
50.....	2.56%	3.92%	0.425%	0.176%	0.91%	0.75%	1.60%	4.50%	6.10%
55.....	2.56%	3.72%	0.598%	0.252%	1.23%	1.01%	1.50%	4.50%	6.00%
60.....	2.56%	3.60%	0.755%	0.383%	1.32%	1.08%	1.30%	4.50%	5.80%
65.....	2.56%	3.60%	1.179%	0.670%	1.32%	1.08%	1.00%	4.50%	5.50%

<sup>1</sup> The assumed rate is the greater of the select rates shown in Exhibit D or the ultimate rate shown at the appropriate age.

### Exhibit C—Judicial Division

Sample Ages	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death		Disability		Seniority <sup>1</sup>	Base (Economy)	Increase (Next Year)
	Men	Women	Men	Women	Men	Women			
30.....	2.00%	2.00%	0.040%	0.025%	0.06%	0.06%	1.51%	4.50%	6.01%
35.....	2.00%	2.00%	0.055%	0.035%	0.07%	0.07%	1.20%	4.50%	5.70%
40.....	2.00%	2.00%	0.095%	0.058%	0.10%	0.10%	0.70%	4.50%	5.20%
45.....	2.00%	2.00%	0.210%	0.102%	0.17%	0.17%	0.50%	4.50%	5.00%
50.....	2.00%	2.00%	0.425%	0.176%	0.31%	0.31%	0.50%	4.50%	5.00%
55.....	2.00%	2.00%	0.598%	0.252%	0.56%	0.56%	0.50%	4.50%	5.00%
60.....	2.00%	2.00%	0.755%	0.383%	1.19%	1.19%	0.50%	4.50%	5.00%
65.....	2.00%	2.00%	1.179%	0.670%	1.65%	1.65%	0.50%	4.50%	5.00%

<sup>1</sup> Pay raises are subject to legislative approval. Percentages shown are based on prior experience.

### Exhibit D

Years of Service	Percent of Members With Less Than Five Years of Service Withdrawing from Employment Next Year <sup>1</sup>					
	State Category		School Category		Municipal Division	
	Men	Women	Men	Women	Men	Women
0.....	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
1.....	15.0%	16.0%	15.0%	16.0%	14.0%	16.0%
2.....	12.0%	12.5%	12.0%	12.5%	11.0%	14.0%
3.....	9.0%	9.5%	9.0%	9.5%	9.0%	13.0%
4.....	7.5%	7.5%	7.5%	7.5%	7.0%	11.0%

<sup>1</sup> There are no select withdrawal assumptions for the Judicial Division and State Troopers.

## Single Life Retirement Value Assumptions

### Exhibit E—State and School, Municipal, and Judicial Divisions

Sample Attained Ages	Present Value of \$1 Monthly for Life		Present Value of \$1 Monthly Increasing 3.5% Annually		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
40.....	\$134.54	\$137.96	\$199.92	\$209.65	40.79	46.04
45.....	130.86	135.61	190.30	202.15	36.05	41.20
50.....	126.43	132.46	179.46	193.10	31.53	36.45
55.....	121.31	128.32	167.59	182.33	27.27	31.81
60.....	114.38	122.54	153.31	169.15	23.09	27.23
65.....	105.03	115.05	136.29	153.81	19.01	22.84
70.....	94.20	105.62	118.25	136.38	15.32	18.68
75.....	82.40	94.00	100.09	117.03	12.09	14.80
80.....	70.19	80.84	82.60	96.94	9.36	11.35
85.....	\$58.35	\$65.86	\$66.72	\$76.14	7.13	8.29

## Percent of Eligible Members Retiring Next Year Assumptions

### Exhibit F

Retirement Ages	State Category		State Troopers	School Category		Municipal Division		Judicial Division
	Men	Women		Men	Women	Men	Women	
50.....	12%	14%	20%	14%	14%	10%	11%	10%
51.....	12%	14%	20%	14%	14%	10%	11%	10%
52.....	12%	14%	20%	14%	14%	10%	11%	10%
53.....	12%	14%	20%	14%	14%	10%	11%	10%
54.....	18%	20%	20%	24%	23%	15%	16%	10%
55.....	18%	20%	20%	24%	23%	15%	16%	10%
56.....	18%	20%	20%	24%	23%	15%	16%	10%
57.....	18%	20%	20%	24%	23%	15%	16%	10%
58.....	18%	20%	20%	24%	23%	15%	16%	10%
59.....	18%	20%	20%	24%	23%	15%	16%	10%
60.....	14%	14%	20%	16%	16%	15%	12%	10%
61.....	14%	14%	36%	16%	16%	15%	12%	10%
62.....	14%	14%	52%	16%	16%	15%	12%	10%
63.....	14%	14%	68%	16%	16%	15%	12%	10%
64.....	14%	14%	84%	16%	16%	15%	12%	10%
65.....	23%	22%	100%	21%	21%	22%	19%	25%
66.....	23%	22%	100%	21%	21%	22%	19%	15%
67.....	23%	22%	100%	21%	21%	22%	19%	15%
68.....	23%	22%	100%	21%	21%	22%	19%	15%
69.....	23%	22%	100%	21%	21%	22%	19%	15%
70.....	100%	100%	100%	100%	100%	100%	100%	40%
71.....	100%	100%	100%	100%	100%	100%	100%	40%
72.....	100%	100%	100%	100%	100%	100%	100%	100%
73.....	100%	100%	100%	100%	100%	100%	100%	100%
74.....	100%	100%	100%	100%	100%	100%	100%	100%
75.....	100%	100%	100%	100%	100%	100%	100%	100%

## Actuarial Section

### Schedule of Retirees and Beneficiaries Added to and Removed from Benefit Payroll<sup>1</sup>

Year Ended	Added to Payroll		Removed from Payroll		Payroll—End of Year		Cost of Living Stabilization Fund (CLSF)	Average Annual Benefits	Increase in Average Benefits
	No.	Annual Benefits	No.	Annual Benefits	No. <sup>3</sup>	Annual Benefits			
12/31/93	3,624	\$63,975,396	1,270	\$9,695,472	40,542	\$492,925,488	\$61,040,724	\$13,664	6.7%
12/31/94	3,121	51,809,484	1,301	10,650,936	42,362	605,429,820	N/A <sup>2</sup>	14,292	4.6%
12/31/95	3,174	54,087,286	1,496	17,421,180	44,040	657,482,568	N/A <sup>2</sup>	14,929	4.5%
12/31/96	3,074	53,056,140	1,390	15,449,340	45,716	726,848,793	N/A <sup>2</sup>	15,899	6.5%
12/31/97	3,411	71,578,344	1,477	18,628,140	47,621	863,077,468	N/A <sup>2</sup>	18,124	14.0%
12/31/98	3,139	78,278,484	1,694	13,692,660	49,808	926,962,944	N/A <sup>2</sup>	18,611	2.7%
12/31/99	4,212	115,746,756	1,562	22,867,068	52,458	1,026,797,016	N/A <sup>2</sup>	19,574	5.2%
12/31/00	4,369	123,249,792	1,680	28,151,484	55,147	1,142,638,708	N/A <sup>2</sup>	20,720	5.9%
12/31/01	4,016	118,919,172	1,247	16,325,628	57,860	1,281,834,264	N/A <sup>2</sup>	22,154	6.9%
12/31/02	4,064	\$123,812,748	1,376	\$19,675,356	60,548	\$1,427,278,692	N/A <sup>2</sup>	\$23,573	6.4%

<sup>1</sup> Numbers derived on an accrual basis.

<sup>2</sup> On March 1, 1994, in accordance with House Bill 93-1324, the CLSF was terminated and the assets of the CLSF were transferred to the retirement benefits reserve within each of the Division Trust Funds. The 2 percent of salary contribution earmarked for the CLSF reverted to the Division Trust Funds.

<sup>3</sup> The number includes retirees and beneficiaries not being paid at the end of the year (e.g., future spousal benefits).

### Member-Retiree Comparison<sup>1</sup>

The number of persons receiving monthly retirement benefits has grown steadily in relation to membership. This trend will continue for many years into the future. The retirement benefit disbursements shown in the right-hand column include cost-of-living increases paid in years since 1970. Prior to 1981, figures are for years ended June 30.

Year	Number of Retiree Accounts on 12/31	Number of Member Accounts on 12/31 <sup>2</sup>	Retiree Accounts as % of Members on 12/31	Total Benefits Paid—Year Ended 12/31
1940	93	3,715	2.5%	\$72,588
1945	171	5,585	3.1%	137,442
1950	280	11,853	2.4%	237,866
1955	747	21,185	3.5%	745,679
1960	1,775	33,068	5.4%	2,055,139
1965	3,631	49,701	7.3%	5,486,225
1970	6,308	65,586	9.6%	13,115,234
1975	11,650	84,781	13.7%	32,820,433
1980	17,301	96,473	17.9%	71,289,456
1985	24,842	101,409	24.5%	192,456,029
1990	32,955	115,350	27.4%	350,398,094
1992	36,186	162,980	22.2%	453,538,219
1993	38,500	174,685	22.0%	523,746,160
1994	40,257	187,907	21.4%	586,645,446
1995	41,909	203,102	20.6%	639,501,796
1996	43,611	210,893	20.7%	694,349,889
1997	45,525	220,860	20.6%	787,128,075
1998	47,735	221,978	21.5%	893,810,708
1999	50,344	238,111	21.1%	989,536,328
2000	53,015	248,104	21.4%	1,093,779,068
2001	55,733	263,712	21.1%	1,228,730,063
2002	58,357	271,989	21.5%	\$1,372,219,187

<sup>1</sup> Numbers derived on a cash basis.

<sup>2</sup> Includes inactive member accounts.

## Schedule of Members in Valuation

By Attained Age and Years of Service As of December 31, 2002

### State Category

Members included in the State Category valuation totaled 53,983 and involved annual salaries totaling \$2,136,930,009. The average age for these members (excluding State Troopers) was 44.3 years, and the average service was 8.2 years. The average age for State Troopers was 39.1 years, and the average service was 10.4 years.

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	522	0	0	0	0	0	0	522	\$4,132,111
20-24	1,860	12	0	0	0	0	0	1,872	32,256,270
25-29	3,426	279	3	0	0	0	0	3,708	106,272,442
30-34	3,716	1,323	247	4	0	0	0	5,290	186,070,401
35-39	4,370	1,399	940	233	12	0	0	6,954	246,276,093
40-44	3,202	1,574	1,352	913	332	15	0	7,388	301,876,011
45-49	3,173	1,692	1,583	1,273	903	374	6	9,004	393,062,139
50-54	2,601	1,588	1,646	1,350	990	793	115	9,083	417,049,857
55-59	1,720	1,012	1,091	942	680	524	236	6,205	290,510,209
60	210	162	173	131	88	66	39	869	38,984,327
61	164	91	141	93	67	42	34	632	28,682,071
62	152	91	96	81	60	31	23	534	23,206,691
63	123	72	68	68	41	16	29	417	17,494,672
64	89	64	53	48	33	34	23	344	14,551,549
65	92	57	50	32	30	15	16	292	11,591,196
66	74	24	33	22	12	6	12	183	6,377,263
67	52	23	30	18	9	12	4	148	4,816,706
68	45	16	23	11	6	10	8	119	4,404,740
69	44	16	11	10	6	1	0	88	2,007,105
70+	151	53	45	27	33	13	9	331	7,308,156
<b>Totals</b>	<b>25,786</b>	<b>9,548</b>	<b>7,585</b>	<b>5,256</b>	<b>3,302</b>	<b>1,952</b>	<b>554</b>	<b>53,983</b>	<b>\$2,136,930,009</b>

### School Category

Members included in the School Category valuation totaled 105,997 and involved annual salaries totaling \$3,141,655,997. The average age for these members was 43.3 years, and the average service was 7.4 years.

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	1,084	0	0	0	0	0	0	1,084	\$7,699,413
20-24	3,887	23	0	0	0	0	0	3,910	63,327,395
25-29	8,728	632	11	0	0	0	0	9,371	245,982,305
30-34	7,461	3,147	331	1	0	0	0	10,940	310,934,870
35-39	8,747	2,607	1,774	237	8	0	0	13,373	343,800,610
40-44	8,556	3,252	2,042	1,654	327	6	0	15,837	429,175,009
45-49	6,974	3,622	2,650	1,883	1,753	471	7	17,360	542,160,993
50-54	4,786	2,871	3,166	2,273	1,816	1,843	229	16,984	641,137,589
55-59	2,990	1,555	1,948	1,727	1,170	808	365	10,563	393,029,599
60	431	186	222	194	154	79	36	1,302	43,843,538
61	357	154	178	149	93	53	28	1,012	29,712,259
62	263	119	143	117	95	49	15	801	23,420,725
63	241	75	110	92	62	42	11	633	16,965,429
64	215	85	88	55	56	31	8	538	12,898,002
65	197	66	74	36	45	24	10	452	10,257,831
66	151	56	45	27	20	13	9	321	6,647,454
67	148	39	44	17	17	12	11	288	5,063,986
68	136	41	29	15	11	7	3	242	3,699,156
69	115	36	19	13	12	8	5	208	2,975,279
70+	450	150	90	32	27	15	14	778	8,924,555
<b>Totals</b>	<b>55,917</b>	<b>18,716</b>	<b>12,964</b>	<b>8,522</b>	<b>5,666</b>	<b>3,461</b>	<b>751</b>	<b>105,997</b>	<b>\$3,141,655,997</b>

## Actuarial Section

### Schedule of Members in Valuation

By Attained Age and Years of Service As of December 31, 2002

**Municipal Division** Members included in the Municipal Division valuation totaled 12,509 and involved annual salaries totaling \$474,760,010. The average age for these members was 42.2 years, and the average service was 7.1 years.

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	347	0	0	0	0	0	0	347	\$2,308,990
20-24	697	13	0	0	0	0	0	710	12,865,883
25-29	879	92	1	0	0	0	0	972	28,652,470
30-34	934	280	57	3	0	0	0	1,274	45,418,062
35-39	1,042	395	154	57	2	0	0	1,650	60,588,668
40-44	914	440	306	231	95	5	0	1,991	84,787,719
45-49	803	384	325	273	188	67	1	2,041	90,046,882
50-54	587	293	275	232	202	112	32	1,733	80,215,984
55-59	359	146	178	140	99	68	36	1,026	45,496,733
60	54	27	21	16	14	9	6	147	6,051,454
61	31	16	14	16	15	8	3	103	4,273,655
62	30	21	16	10	9	4	1	91	3,437,934
63	30	14	14	12	7	2	2	81	2,681,608
64	23	5	10	3	4	2	5	52	1,665,352
65	22	9	6	6	4	1	1	49	1,545,638
66	19	5	5	2	0	2	0	33	722,388
67	14	8	4	1	4	0	1	32	943,549
68	13	9	2	3	3	1	0	31	815,988
69	13	2	3	2	2	0	1	23	689,472
70+	68	31	11	6	5	1	1	123	1,551,581
<b>Totals</b>	<b>6,879</b>	<b>2,190</b>	<b>1,402</b>	<b>1,013</b>	<b>653</b>	<b>282</b>	<b>90</b>	<b>12,509</b>	<b>\$474,760,010</b>

**Judicial Division** Members included in the Judicial Division valuation totaled 272 and involved annual salaries totaling \$26,357,586. The average age for Judicial Division members was 54.7 years, and the average service was 12.9 years.

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	0	0	0	0	0	0	0	0	—
20-24	0	0	0	0	0	0	0	0	—
25-29	0	0	0	0	0	0	0	0	—
30-34	1	0	0	0	0	0	0	1	\$62,473
35-39	2	0	0	0	0	0	0	2	115,509
40-44	9	7	5	1	0	0	0	22	1,865,584
45-49	9	5	7	6	0	0	0	27	2,595,717
50-54	22	18	18	15	6	3	0	82	7,813,353
55-59	14	12	10	16	16	5	2	75	7,468,651
60	2	0	0	3	6	2	0	13	1,302,295
61	2	4	0	3	1	0	0	10	1,068,793
62	0	1	1	5	3	2	0	12	1,257,596
63	0	0	0	1	1	1	0	3	285,276
64	0	0	1	1	2	1	0	5	547,997
65	0	1	0	0	0	2	0	3	337,280
66	0	0	0	0	0	0	0	0	—
67	0	0	1	0	0	2	2	5	456,814
68	0	0	1	0	0	0	1	2	179,494
69	0	0	1	0	2	0	0	3	242,079
70+	0	1	2	3	0	1	0	7	758,675
<b>Totals</b>	<b>61</b>	<b>49</b>	<b>47</b>	<b>54</b>	<b>37</b>	<b>19</b>	<b>5</b>	<b>272</b>	<b>\$26,357,586</b>

## Summary of Solvency Test

The Colorado PERA funding objective is to be able to pay long-term benefit promises through contributions that remain approximately level from year to year as a percent of salaries earned by members. In this way, members and employers in each year pay their fair share for retirement service accrued in that year by PERA members.

Until 1999, Colorado PERA's contribution rates were occasionally increased to fund benefit improvements, or temporarily decreased at the State Legislature's direction. (See "Schedule of Contribution Rate History" on page 71.) Legislation enacted in 1999 and 2000:

- Required a permanent one-time 1 percent of salary reduction in the contribution rate for PERA's State, School, and Judicial employers, and
- Set forth a gainsharing formula in which PERA employer contribution rates would fluctuate annually, based on any overfunding in the PERA retirement trust funds. The amount needed to reduce PERA's overfunding over a 10-year period would be used toward:
  - Further employer contribution reductions in all PERA Divisions.
  - Increased allocations to the PERA Health Care Trust Fund (HCTF).
  - Matching ("MatchMaker") contributions to PERA members' voluntary contributions to 401(k), 457, 403(b), and 401(a) tax-deferred retirement plans.

If the retirement system follows level contribution rate financing principles, the system will pay all promised benefits when due—the ultimate test of financial soundness.

A short-term solvency test is one means of checking PERA's funding progress. In a short-term solvency test, the retirement plan's present assets (investments and cash) are compared with: (1) member contributions on deposit, (2) the liabilities for future benefits to persons who have retired, and (3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level contribution rate financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retirees (liability 2) will be fully covered by present assets, except in rare circumstances.

In addition, the liabilities for service already rendered by members (liability 3) may be covered by the remainder of present assets. Generally, if the system has been using level contribution rate financing, the funded portion of liability 3 will increase over time.

## Total Actuarial Liabilities

Valuation Date	Member Contributions (1) <sup>1</sup>	Retirees and Beneficiaries (2)	Portion of Active Members (3)	Employer-Financed Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Reported Assets		
					(1)	(2)	(3)
12/31/93	\$2,093,693,307	\$6,516,956,622	\$6,186,381,981	\$12,668,101,503	100%	100%	66.5%
12/31/94	2,395,959,381	7,163,767,095	6,204,351,274	13,717,384,820	100%	100%	67.0%
12/31/95	3,727,497,280	7,862,779,572	5,510,030,884	15,349,515,165	100%	100%	68.2%
12/31/96	4,040,814,028	8,339,476,944	5,611,614,086	17,321,769,518	100%	100%	88.1%
12/31/97	4,161,334,387	10,303,331,080	7,029,404,533	19,776,487,860	100%	100%	75.6%
12/31/98	4,413,349,123	11,659,836,332	7,842,874,545	23,069,582,456	100%	100%	89.2%
12/31/99	4,631,541,543	12,650,882,161	8,564,267,296	26,643,394,180	100%	100%	100%
12/31/00	4,833,143,560	14,162,593,257	9,170,504,492	29,625,878,179	100%	100%	100%
12/31/01	5,562,390,361	16,301,486,412	9,503,435,639	30,935,478,756	100%	100%	95%
<b>12/31/02</b>	<b>\$6,118,094,036</b>	<b>\$18,208,961,462</b>	<b>\$10,268,677,964</b>	<b>\$30,554,140,114</b>	<b>100%</b>	<b>100%</b>	<b>61%</b>

<sup>1</sup> Includes accrued interest on member contributions.

### Summary of Unfunded/Overfunded Actuarial Accrued Liabilities

Unfunded/overfunded actuarial accrued liabilities are the difference between actuarially calculated liabilities for service already rendered and the assets of the retirement fund. It is natural for unfunded liabilities to exist for Colorado PERA and other defined benefit retirement plans.

The law governing Colorado PERA requires that these unfunded liabilities be financed (amortized) systematically over future years. This law requires that contribution rates be set at a level so that if actual experience matches actuarial assumptions, unfunded actuarial accrued liabilities would be paid off over a maximum 40-year period.

The ratio of PERA's assets to accrued liabilities exceeded 100 percent for the first time on December 31, 1999, and again exceeded it in 2000. In 2001 the ratio fell to 99 percent and fell again in 2002 to 88 percent. However, as of December 31, 2002, current contribution levels are not sufficient to amortize unfunded liabilities within a 40-year period in the State and School Division nor in the Municipal Division. The amortization period was 13 years in the Judicial Division.

Unfunded liabilities in all Divisions on December 31, 2002, were mainly due to the Fund's significant investment losses incurred during the last three years. Other factors that accounted for increased unfunded liabilities were as follows:

- New actuarial assumptions adopted by the PERA Board in 2001 recognize longer life expectancies. Although the new assumptions recognized increased rates of retirement, more state, school, and municipal members retired at younger ages in 2002 than was expected.
- Members purchased PERA service credit in record numbers. More state and school members received higher salary increases than expected.
- In accordance with the 2001 gainsharing law's formula, a small portion of the overfunding that existed in the PERA retirement trust funds has been allocated toward employer contribution rate reductions in all

PERA Divisions, increased allocations to PERA's Health Care Trust Fund (HCTF), and matching ("MatchMaker") contributions to members' voluntary contributions to 401(k), 457, 403(b), and 401(a) tax-deferred retirement plans.

PERA initiated legislation in 2003 that would have increased employer contribution rates as needed to properly amortize unfunded liabilities, terminate the MatchMaker contributions after December 2003 payrolls, and resume gainsharing only if PERA becomes 110 percent funded in the future. However, Senate Bill 101 was vetoed by Governor Owens on May 22, 2003. In addition, the PERA Board decided in 2002 to increase the cost of purchasing service credit on purchases initiated by members on or after November 1, 2003. The new rates are closer to the actuarial cost of service credit purchases.

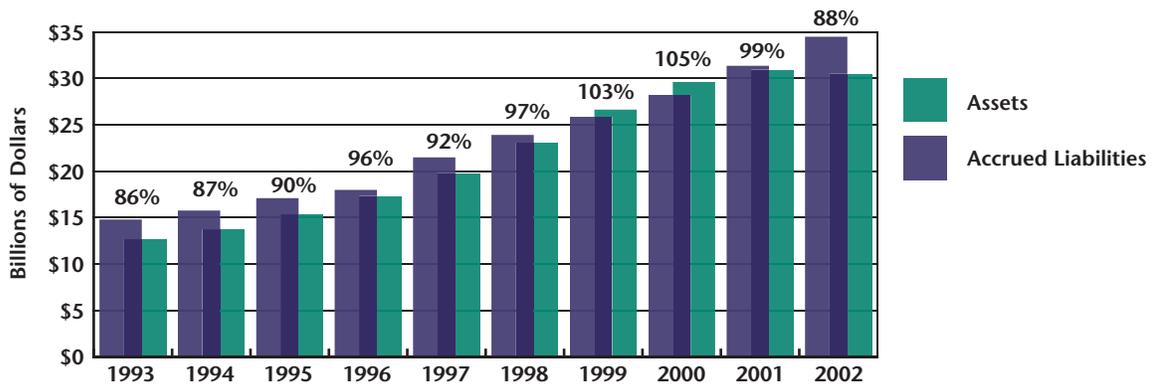
Benefits to retirees are "fully funded," that is, assets reserved for benefits currently being paid equal liabilities for those benefits. Liabilities for members are based on service rendered toward their retirement benefits payable in the future. Unfunded actuarial accrued liabilities exist because liabilities for such service by members exceed assets currently on hand for such future benefits.

Since inflation decreases the dollar's value, it is important to examine more than only the dollar amounts of assets, benefits paid, member salaries, and unfunded/overfunded actuarial accrued liabilities when assessing the Plan's financial status. While no one or two measures can fully describe the financial condition of the Plan, unfunded/overfunded actuarial accrued liability dollars divided by member salary dollars provide a meaningful index. The smaller the ratio, the stronger the system. Observation of this relative index over a period of years will give an indication of the financial strength of the system. This ratio has decreased at times over the last decade, but increased sharply in the last two years. This increase reflects the poor investment environment, as well as increased liabilities.

## Unfunded/Overfunded Actuarial Accrued Liabilities (UAAL/OAAL)

Valuation Date	Total Actuarial Accrued Liabilities	Valuation Assets	Assets as a % of Accrued Liabilities	Unfunded/Overfunded Actuarial Accrued Liabilities	Member Salaries	UAAL/OAAL as a % of Member Salaries
12/31/93	\$14,797,031,910	\$12,668,101,503	85.6%	\$2,128,930,407	\$3,451,307,428	61.7%
12/31/94	15,764,077,750	13,717,384,820	87.0%	2,046,692,930	3,578,972,051	57.2%
12/31/95	17,100,307,736	15,349,515,165	89.8%	1,750,792,571	3,803,799,573	46.0%
12/31/96	17,991,905,058	17,321,769,518	96.3%	670,135,540	3,968,963,337	16.9%
12/31/97	21,494,070,000	19,776,487,860	92.0%	1,717,582,140	4,211,820,401	40.8%
12/31/98	23,916,060,522	23,069,582,456	96.5%	846,478,066	4,477,302,776	18.9%
12/31/99	25,846,691,306	26,643,394,180	103.1%	(796,702,874)	4,709,759,629	(16.9%)
12/31/00	28,166,241,309	29,625,878,179	105.2%	(1,459,636,870)	4,982,542,964	(29.3%)
12/31/01	31,367,312,412	30,935,478,756	98.6%	431,833,656	5,415,327,493	8.0%
12/31/02	\$34,595,733,462	\$30,554,140,114	88.3%	\$4,041,593,348	\$5,779,703,602	69.9%

## Assets as a Percent of Accrued Liabilities 1993–2002



## Actuarial Section

### Schedule of Gains and Losses in Accrued Liabilities

Resulting From Differences Between Assumed Experience and Actual Experience

Type of Activity	\$ Gain (or Loss) for Years Ended December 31 (In Millions of Dollars)					
	2002	2001	2000	1999	1998	1997
Age and service retirements <sup>1</sup>	(\$557.4)	(\$178.4)	(\$323.4)	(\$228.8)	(\$306.5)	(\$301.5)
Disability retirements <sup>2</sup>	(3.1)	0.1	0.4	(4.1)	(23.8)	(72.0)
Deaths <sup>3</sup>	5.9	11.5	(12.2)	(6.5)	(9.3)	6.9
Withdrawal from employment <sup>4</sup>	(20.4)	0.6	21.5	(26.4)	(49.2)	(105.2)
New entrants <sup>5</sup>	(68.6)	(41.0)	(166.1)	(133.9)	(49.1)	(39.3)
Pay increases <sup>6</sup>	(182.7)	(495.5)	(39.4)	33.7	110.4	118.8
Investment income <sup>7</sup>	(2,710.8)	(780.1)	989.1	1,847.4	1,729.5	1,045.9
Other	(323.9)	5.7	273.1	180.2	(292.6)	4.4
Gain (or loss) during year	(3,861.0)	(1,477.1)	743.0	1,661.6	1,109.4	658.0
Non-recurring items <sup>8</sup>	—	(572.5)	(288.3)	(92.9)	(269.4)	(1,917.5)
<b>Composite gain (or loss) during year</b>	<b>(\$3,861.0)</b>	<b>(\$2,049.6)</b>	<b>\$454.7</b>	<b>\$1,568.7</b>	<b>\$840.0</b>	<b>(\$1,259.5)</b>

<sup>1</sup> Age and service retirements: If members retire at older ages than assumed, there is a gain. If members retire at younger ages, a loss occurs.

<sup>2</sup> Disability retirements: If disability claims are lower than was assumed, there is a gain. If a higher number of disability claims was experienced, there is a loss.

<sup>3</sup> Deaths: If survivor claims are lower than was assumed, there is a gain. If a higher number of survivor claims was experienced, there is a loss. If retirees live longer than assumed, there is a loss; if retirees die sooner than assumed, there is a gain.

<sup>4</sup> Withdrawal from employment: If more members terminate and more liabilities are released by withdrawals than are assumed, there is a gain. If fewer liabilities are released, a loss occurs.

<sup>5</sup> New entrants: If the number of new members entering the Plan is lower than was assumed, there is a loss. If a higher number of new members entered the Plan than was assumed, there is a gain.

<sup>6</sup> Pay increases: If there are smaller salary increases than assumed, there is a gain. If greater increases occur, a loss results.

<sup>7</sup> Investment income: If there is greater investment income than assumed, there is a gain. If less income is received, a loss occurs.

<sup>8</sup> Non-recurring items: Include changes to plan benefits, changes in actuarial method or assumptions, and special transfers to retired life funds.

### Schedule of Computed Employer Contribution Rates for Fiscal Years Beginning in 2004

Contributions:	Expressed as a Percentage of Member Payroll		
	State and School Division	Municipal Division	Judicial Division
Service retirement benefits	11.34%	10.90%	13.22%
Disability retirement benefits	0.89%	1.45%	1.92%
Survivor benefits	0.53%	0.64%	1.29%
Termination withdrawals	3.06%	3.35%	1.53%
<b>Total normal cost</b>	<b>15.82%</b>	<b>16.34%</b>	<b>17.96%</b>
Member contributions	8.02% <sup>1</sup>	8.00%	8.00% <sup>2</sup>
Employer normal cost	7.80%	8.34%	9.96%
Percentage available to amortize unfunded actuarial accrued liabilities	0.36%	0.05%	(2.76)%
Amortization period	Infinite	Infinite	13 years
<b>Total employer contribution rate for actuarially funded benefits<sup>3</sup></b>	<b>9.26%</b>	<b>9.49%</b>	<b>8.30%</b>
Health Care Trust Fund	1.10%	1.10%	1.10%
<b>Employer contribution rate for defined benefit plan</b>	<b>8.16%<sup>1</sup></b>	<b>8.39%</b>	<b>7.20%</b>

<sup>1</sup> Weighted average of more than one statutory rate.

<sup>2</sup> Assumes no judge will elect a refund of contributions made for the 17th through the 20th year of service.

<sup>3</sup> Net of percentage available for MatchMaker and statutory reductions in contribution rates.

## Schedule of Contribution Rate History

				Percent of Payroll						Percent of Payroll	
				Member	Employer					Available from Employer Contribution	
				Contribution	Contribution					for MatchMaker (Maximum Match)	
				Rate	Rate <sup>1</sup>						
<b>State and School Division<sup>3</sup></b>											
<i>Members (Other Than State Troopers)</i>											
7-1-97	to	6-30-98		8.00%	11.50%	1-1-01		to	12-31-01	3%	
7-1-98	to	6-30-00		8.00%	11.40%	1-1-02		to	12-31-02	3%	
7-1-00	to	6-30-01		8.00%	10.40%	<b>Municipal Division</b>					
7-1-01	to	6-30-02		8.00%	9.90%	1-1-01		to	12-31-01	2%	
7-1-02	to	12-31-02		8.00%	10.04%	1-1-02		to	12-31-02	3%	
<i>State Troopers</i>											
7-1-45	to	6-30-69		7.00%	7.00%	<b>Judicial Division</b>					
7-1-69	to	6-30-70		8.00%	8.00%	1-1-01		to	12-31-01	7%	
7-1-70	to	6-30-71		8.00%	9.00%	1-1-02		to	12-31-02	7%	
7-1-71	to	6-30-73		8.00%	9.50%	<b>Percent of Payroll</b>					
7-1-73	to	6-30-74		8.75%	10.50%	<i>Allocated from Employer Contribution</i>					
7-1-74	to	6-30-75		8.75%	11.50%	<i>to Health Care Trust Fund</i>					
7-1-75	to	8-31-80		8.75%	11.64%						
9-1-80	to	12-31-81		8.75%	13.20%	<b>State and School Division</b>					
1-1-82	to	6-30-87		9.00%	13.20%	7-1-85	to	6-30-99	0.80%		
7-1-87	to	6-30-88		9.00%	11.20%	7-1-99	to	12-31-00	1.10%		
7-1-88	to	6-30-89		9.00%	13.20%	1-1-01	to	12-31-01	1.42%		
7-1-89	to	4-30-92		12.30%	13.20%	1-1-02	to	12-31-02	1.64%		
5-1-92	to	6-30-92		12.30%	7.20% <sup>2</sup>	<b>Municipal Division</b>					
7-1-92	to	6-30-93		11.50%	12.20%	7-1-85	to	6-30-99	0.80%		
7-1-93	to	6-30-97		11.50%	13.20%	7-1-99	to	12-31-00	1.10%		
7-1-97	to	6-30-99		11.50%	13.10%	1-1-01	to	12-31-01	1.96%		
7-1-99	to	6-30-01		10.00%	13.10%	1-1-02	to	12-31-02	2.31%		
7-1-01	to	6-30-02		10.00%	12.60%	<b>Judicial Division</b>					
7-1-02	to	12-31-02		10.00%	12.74%	7-1-85	to	6-30-99	0.80%		
<b>Municipal Division</b>											
1-1-44	to	12-31-49		3.50%	3.50%	7-1-99	to	12-31-00	1.10%		
1-1-50	to	6-30-58		5.00%	5.00%	1-1-01	to	12-31-01	4.37%		
7-1-58	to	6-30-69		6.00%	6.00%	1-1-02	to	12-31-02	4.37%		
7-1-69	to	12-31-69		7.00%	6.00%	<b>Percent of Payroll</b>					
1-1-70	to	12-31-70		7.00%	7.00%	<i>Member</i>					
1-1-71	to	6-30-73		7.00%	7.50%	<i>Contribution</i>					
7-1-73	to	12-31-73		7.75%	7.50%	<i>Rate</i>					
1-1-74	to	12-31-74		7.75%	8.50%	<i>Employer</i>					
1-1-75	to	12-31-75		7.75%	9.50%	<i>Contribution</i>					
1-1-76	to	12-31-80		7.75%	9.86%	<i>Rate<sup>1</sup></i>					
1-1-81	to	12-31-81		7.75%	10.20%						
1-1-82	to	6-30-91		8.00%	10.20%	<b>State and School Division<sup>3</sup></b>					
7-1-91	to	12-31-00		8.00%	10.00%	1-1-44	to	12-31-49	3.50%		
1-1-01	to	12-31-01		8.00%	9.43%	1-1-50	to	6-30-58	5.00%		
1-1-02	to	12-31-02		8.00%	9.19%	7-1-58	to	6-30-69	6.00%		
<b>Judicial Division</b>											
7-1-49	to	6-30-57		5.00%	5.00%	7-1-69	to	12-31-69	7.00%		
7-1-57	to	6-30-73		6.00%	12.00%	1-1-70	to	12-31-70	7.00%		
7-1-73	to	6-30-80		7.00%	12.00%	1-1-71	to	12-31-71	7.00%		
7-1-80	to	8-30-80		7.00%	13.00%	1-1-73	to	6-30-73	7.00%		
9-1-80	to	12-31-81		7.00%	15.00%	7-1-73	to	12-31-73	7.75%		
1-1-82	to	6-30-87		8.00%	15.00%	1-1-74	to	12-31-74	7.75%		
7-1-87	to	6-30-88		8.00%	13.00%	1-1-75	to	12-31-75	7.75%		
7-1-88	to	6-30-00		8.00%	15.00%	1-1-76	to	12-31-80	7.75%		
7-1-00	to	6-30-01		8.00%	14.00%	1-1-81	to	12-31-81	7.75%		
7-1-01	to	12-31-02		8.00%	11.82%	1-1-82	to	6-30-87	8.00%		
<b>State Division<sup>3</sup></b>											
<i>Members (Other Than State Troopers)</i>											
8-1-31	to	6-30-38		3.50%	0.00%	7-1-87	to	6-30-88	8.00%		
7-1-38	to	6-30-49		3.50%	3.50%	7-1-88	to	6-30-88	8.00%		
7-1-49	to	6-30-58		5.00%	5.00%	7-1-91	to	4-30-92	8.00%		
7-1-58	to	6-30-69		6.00%	6.00%	5-1-92	to	6-30-92	8.00%		
7-1-69	to	6-30-70		7.00%	7.00%	7-1-92	to	6-30-93	8.00%		
7-1-70	to	6-30-71		7.00%	8.00%	7-1-93	to	6-30-97	8.00%		
7-1-71	to	6-30-73		7.00%	8.50%						
7-1-73	to	6-30-74		7.75%	9.50%						
7-1-74	to	6-30-75		7.75%	10.50%						
7-1-75	to	8-31-80		7.75%	10.64%						
9-1-80	to	12-31-81		7.75%	12.20%						
1-1-82	to	6-30-87		8.00%	12.20%						
7-1-87	to	6-30-88		8.00%	12.20%						
7-1-88	to	6-30-89		8.00%	12.20%						
7-1-91	to	4-30-92		8.00%	11.60%						
5-1-92	to	6-30-92		8.00%	5.60% <sup>2</sup>						
7-1-92	to	6-30-93		8.00%	10.60%						
7-1-93	to	6-30-97		8.00%	11.60%						

<sup>1</sup> All employer contribution rates shown for the Divisions between July 1, 1985, to December 31, 2002, include the Health Care Trust Fund allocation.

<sup>2</sup> Legislation created an annual reduction equal to 1 percent of salary retroactive to July 1, 1991, to be taken during May and June of 1992.

<sup>3</sup> State and School Divisions were merged July 1, 1997.

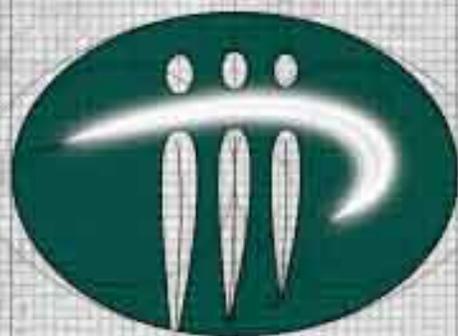
## Actuarial Section

### Schedule of Active Member Valuation Data

Year	Number of Employers	Number of Members	Annual Payroll	Average Annual Salary	% Increase (Decrease) in Average Pay
1993	355	139,807	\$3,451,307,428	\$24,686	(1.67)%
1994	360	140,194	3,578,972,051	25,529	3.41%
1995	367	144,420	3,803,799,573	26,338	3.17%
1996	370	147,670	3,968,963,337	26,877	2.05%
1997	373	152,475	4,211,820,401	27,623	2.78%
1998	374	154,235	4,477,302,776	29,029	5.09%
1999	375	157,967	4,709,759,629	29,815	2.71%
2000	379	162,106	4,982,542,964	30,736	3.09%
2001	385	169,833	5,415,327,493	31,886	3.74%
2002	393	172,761	\$5,779,703,602	\$33,455	4.92%



## Statistical Section



# COLORADO PERA



COLORADO PERA

Personal  
Innovative  
Secure

**Mission Statement:**  
To promote long-term financial security for our membership while maintaining the stability of the fund.



COLORADO PERA

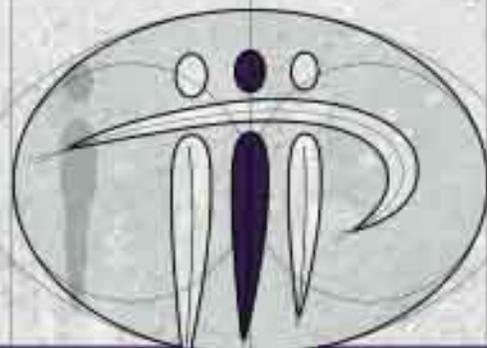
Personal  
Innovative  
Secure

**Vision Statement:**  
To become the retirement plan of choice for all Colorado public employees.



COLORADO PERA

*The three figures are joined together by their common interest, which encircles them. The participants contribute their talent and dedication to public service throughout Colorado and anticipate the security and rewards that PERA funds provide upon retirement. These elements are placed on an oval that serves to accentuate the momentum, continuity, and synergy that is the essence of PERA.*



## Statistical Section

### Schedule of Expenses by Type

(In Thousands of Dollars)

Year	Benefit Payments	Refunds <sup>1</sup>	Administrative Expenses	Disability Insurance	Other	Total
<b>State and School Division</b>						
1997	\$749,313	\$60,686	\$14,090	\$—	\$377	\$824,466
1998	851,676	65,811	14,142	—	2,068	933,697
1999	943,112	89,684	15,794	8,054	1,873	1,058,517
2000	1,042,905	124,096	15,245	4,824	973	1,188,043
2001	1,171,996	90,898	16,363	3,228	1,409	1,283,894
<b>2002</b>	<b>\$1,307,652</b>	<b>\$88,793</b>	<b>\$17,752</b>	<b>\$4,070</b>	<b>\$1,645</b>	<b>\$1,419,912</b>
<b>Municipal Division</b>						
1997	\$32,823	\$8,112	\$996	\$—	\$150	\$42,081
1998	36,967	8,070	1,158	—	(824)	45,371
1999	40,903	10,210	1,391	692	(1,118)	52,078
2000	44,957	14,619	1,339	418	(131)	61,202
2001	50,294	10,645	1,437	283	(721)	61,938
<b>2002</b>	<b>\$57,835</b>	<b>\$10,426</b>	<b>\$1,539</b>	<b>\$360</b>	<b>(\$125)</b>	<b>\$70,035</b>
<b>Judicial Division</b>						
1997	\$4,992	\$145	\$35	\$—	(\$53)	\$5,119
1998	5,168	46	25	—	(442)	4,797
1999	5,521	683	37	38	1	6,280
2000	5,917	—	20	23	(130)	5,830
2001	6,440	282	19	16	281	7,038
<b>2002</b>	<b>\$6,731</b>	<b>\$83</b>	<b>\$20</b>	<b>\$20</b>	<b>(\$461)</b>	<b>\$6,393</b>
<b>Health Care Trust Fund</b>						
1997	\$59,652	\$—	\$—	\$—	\$—	\$59,652
1998	62,395	—	846	—	(2,122)	61,119
1999	64,979	—	483	—	—	65,462
2000	77,332	—	1,134	—	—	78,466
2001	103,472	—	679	—	(368)	103,783
<b>2002</b>	<b>\$118,470</b>	<b>\$—</b>	<b>\$838</b>	<b>\$—</b>	<b>(\$1,056)</b>	<b>\$118,252</b>

<sup>1</sup> Refunds include interest and matching amounts as required by law.

**Schedule of Revenue by Source**

(In Thousands of Dollars)

Year	Member Contributions <sup>1</sup>	Employer Contributions <sup>1</sup>	Service Credit Purchases	Retiree Health Care Premiums	Net Investment Income	Total Revenues
<b>State and School Division</b>						
1997	\$293,059	\$392,898	\$27,029	\$—	\$3,361,986	\$4,074,972
1998	308,379	409,749	43,762	—	3,231,469	3,993,359
1999	324,504	422,025	69,775	—	4,130,854	4,947,158
2000	343,040	420,031	96,023	—	(30,817)	828,277
2001	368,968	314,649	119,719	—	(2,287,062)	(1,483,726)
2002	\$397,315	\$315,825	\$329,572	\$—	(\$3,099,923)	(\$2,057,211)
<b>Municipal Division</b>						
1997	\$23,701	\$27,253	\$853	\$—	\$195,741	\$247,548
1998	26,248	30,186	1,339	—	191,499	249,272
1999	27,893	31,418	3,630	—	249,209	312,150
2000	29,392	32,639	4,678	—	(2,134)	64,575
2001	32,451	25,435	6,916	—	(141,466)	(76,664)
2002	\$35,202	\$21,972	\$30,609	\$—	(\$196,652)	(\$108,869)
<b>Judicial Division</b>						
1997	\$1,485	\$2,636	\$340	\$—	\$19,086	\$23,547
1998	1,517	2,693	89	—	18,394	22,693
1999	1,552	2,689	121	—	23,539	27,901
2000	1,630	2,726	732	—	(200)	4,888
2001	1,806	637	748	—	(13,089)	(9,898)
2002	\$1,982	\$383	\$1,928	\$—	(\$17,522)	(\$13,229)
<b>Health Care Trust Fund</b>						
1997	\$—	\$31,750	\$—	\$20,124	\$15,711	\$67,585
1998	—	33,522	—	21,798	14,089	69,409
1999	—	43,136	—	25,611	17,891	86,638
2000	—	51,351	—	28,751	(94)	80,008
2001	—	74,324	—	43,960	(10,818)	107,466
2002	\$—	\$92,562	\$—	\$48,825	(\$17,742)	\$123,645

<sup>1</sup> Member and employer contribution rate history is shown on page 71.

## Statistical Section

### Member and Benefit Recipient Statistics<sup>1</sup>

	State Category	School Category	Municipal Division	Judicial Division	Total
<b>Active members—12/31/02</b>	53,983	105,997	12,509	272	172,761
<b>Retirements during 2002:</b>					
Disability retirements	76	54	16	0	146
Service retirements	1,261	2,218	195	8	3,682
<b>Total</b>	<b>1,337</b>	<b>2,272</b>	<b>211</b>	<b>8</b>	<b>3,828</b>
<b>Retirement benefits:</b>					
Total receiving disability and service retirement benefits on Dec. 31, 2001	22,336	30,567	2,625	205	55,733
Total retiring during 2002	1,337	2,272	211	8	3,828
Cobeneficiaries continuing after retiree's death	184	171	26	9	390
Returning to retirement rolls from suspension	25	37	9	0	71
<b>Total</b>	<b>23,882</b>	<b>33,047</b>	<b>2,871</b>	<b>222</b>	<b>60,022</b>
Retirees and cobeneficiaries deceased during year	756	798	93	16	1,663
Retirees suspending benefits to return to work	0	2	0	0	2
<b>Total receiving retirement benefits</b>	<b>23,126</b>	<b>32,247</b>	<b>2,778</b>	<b>206</b>	<b>58,357</b>
Annual retirement benefits for retirees as of 12/31/02	\$556,684,740	\$776,764,740	\$58,277,868	\$6,548,664	\$1,398,276,012
Average monthly benefit on 12/31/02	\$2,006	\$2,007	\$1,748	\$2,649	\$1,997
Average monthly benefit for all members who retired during 2002	\$2,799	\$2,544	\$2,718	\$4,379	\$2,646
<b>Survivor benefit accounts:</b>					
Total survivors being paid on 12/31/02	961	1,050	163	17	2,191
Annual benefits payable for survivors as of 12/31/02	\$14,218,584	\$12,377,964	\$2,028,288	\$377,844	\$29,002,680
<b>Future benefits:</b>					
Future retirements to age 60 or 65	3,521	6,358	734	15	10,628
Total annual future benefits	\$29,317,356	\$36,398,637	\$5,662,226	\$278,844	\$71,657,063
Future survivor beneficiaries of inactive members	122	147	23	1	293
<b>Total annual future benefits</b>	<b>\$556,942</b>	<b>\$625,697</b>	<b>\$80,236</b>	<b>\$5,831</b>	<b>\$1,268,706</b>

<sup>1</sup> In addition, as of 12/31/02, there was a total of 89,002 non-vested terminated members due a refund of their contributions—State and School Division: 80,646; Municipal Division: 8,354; and Judicial Division: 2.

### Schedule of Average Retirement Benefits Payable<sup>1</sup>

Year Ended	Average Monthly Benefit	Average Age at Retirement	Average Current Age of Retirees	Average Years of Service at Retirement
12/31/93	\$1,158	60.2	69.7	19.1
12/31/94	1,213	60.0	69.7	19.2
12/31/95	1,266	59.7	69.7	19.4
12/31/96	1,334	59.6	69.2	19.6
12/31/97	1,533	59.2	69.5	19.8
12/31/98	1,580	59.2	69.6	20.1
12/31/99	1,657	59.0	69.4	20.5
12/31/00	1,755	58.8	69.3	20.9
12/31/01	1,876	58.6	69.1	21.2
<b>12/31/02</b>	<b>\$1,997</b>	<b>58.5</b>	<b>68.0</b>	<b>21.6</b>

<sup>1</sup> Includes disability retirements, but not survivor benefits.

### Schedule of Benefit Disbursements by Type<sup>1</sup>

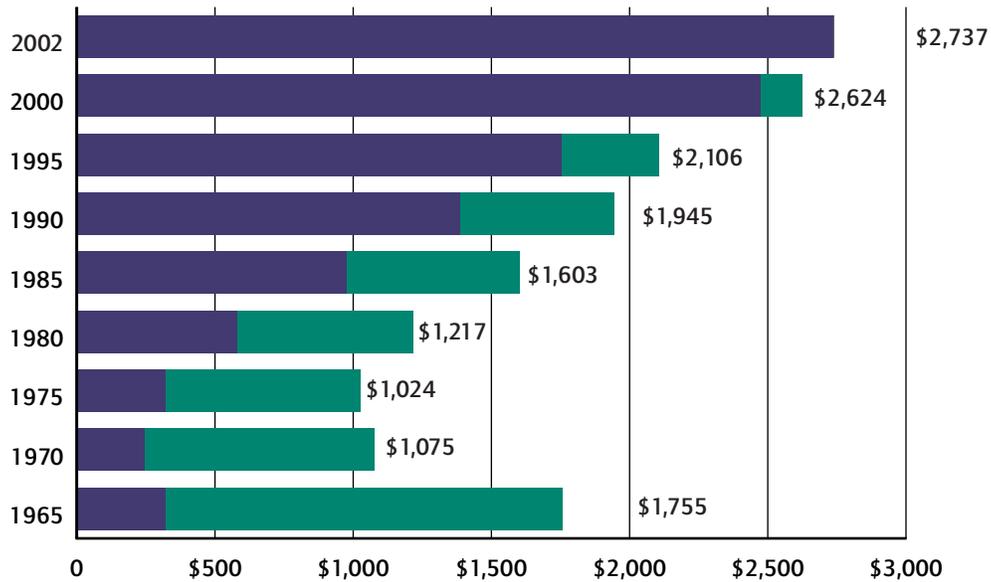
(In Thousands of Dollars)

Year Ended	Retirement Benefits	Survivor Benefits	Contribution Refunds	Interest and Matching Amount Paid	Health Care	Total
12/31/97	\$769,130	\$17,998	\$39,326	\$29,617	\$59,652	\$915,723
12/31/98	874,913	18,898	41,884	32,043	62,395	1,030,133
12/31/99	966,966	22,570	46,230	54,347	64,979	1,155,092
12/31/00	1,073,845	19,934	59,617	79,098	77,332	1,309,826
12/31/01	1,208,022	20,708	45,928	55,897	103,472	1,434,027
12/31/02	\$1,350,359	\$21,859	\$44,450	\$54,852	\$118,470	\$1,589,990

<sup>1</sup> Numbers do not include 401(k) Voluntary Investment Program.

### Current Average Monthly Benefit by Year of Retirement

Service Retiree Accounts as of December 31, 2002



	1965	1970	1975	1980	1985	1990	1995	2000	2002
Original Benefit at Retirement	\$322	\$245	\$321	\$580	\$975	\$1,385	\$1,755	\$2,475	\$2,737
Benefit Increases	\$1,433	\$830	\$703	\$637	\$628	\$560	\$351	\$149	\$0

## Statistical Section

### Schedule of Retirees and Survivors by Type of Benefit

As of December 31, 2002

#### Types of Benefits:

- 1—Age and service retirement.
- 2—Disability retirement.
- 3—Survivor payment—Option 3.
- 4—Survivor payment—children, spouse, or dependent parent.
- 5—Surviving spouse with future benefit.
- 6—Former member with future benefit.

#### Option Selected:

Retirees select one of the following options at retirement:

- 1—Single life benefit.
- 2—Joint benefit with 1/2 to surviving cobeneficiary.
- 3—Joint and survivor benefit.
- 4—Joint benefit with 1/2 to either survivor. (No longer offered to members retiring.)

#### Surviving Cobeneficiary:

Retiree has predeceased the cobeneficiary.

#### Surviving Retiree:

Cobeneficiary has predeceased the retiree.

### State and School Division

Amount of Benefit	Total (Columns 1–5)	Type of Benefit					
		1	2	3	4	5	6
\$1–\$250	2,688	2,404	81	3	166	34	3,438
\$251–\$500	4,388	3,583	462	7	296	40	2,817
\$501–\$750	4,512	3,490	699	12	267	44	1,593
\$751–\$1,000	4,544	3,308	969	14	221	32	854
\$1,001–\$1,250	4,433	3,175	1,057	9	188	4	521
\$1,251–\$1,500	4,317	3,160	990	14	150	3	332
\$1,501–\$1,750	4,175	3,246	812	8	109	0	197
\$1,751–\$2,000	3,708	2,976	625	10	96	1	161
Over \$2,000	24,619	23,172	1,164	80	203	0	275
<b>Totals</b>	<b>57,384</b>	<b>48,514</b>	<b>6,859</b>	<b>157</b>	<b>1,696</b>	<b>158</b>	<b>10,188</b>

Amount of Benefit	Option Selected					
	1	2	3	4	Surviving Cobeneficiary	Surviving Retiree
\$1–\$250	1,669	102	338	15	287	74
\$251–\$500	2,600	237	509	20	552	127
\$501–\$750	2,590	322	487	31	624	135
\$751–\$1,000	2,494	449	623	34	540	137
\$1,001–\$1,250	2,383	510	713	49	434	143
\$1,251–\$1,500	2,342	504	791	29	363	121
\$1,501–\$1,750	2,217	574	819	45	299	104
\$1,751–\$2,000	1,900	576	749	35	259	82
Over \$2,000	12,345	5,068	5,624	164	847	288
<b>Totals</b>	<b>30,540</b>	<b>8,342</b>	<b>10,653</b>	<b>422</b>	<b>4,205</b>	<b>1,211</b>

## Schedule of Retirees and Survivors by Type of Benefit

As of December 31, 2002

**Types of Benefits:**

- 1—Age and service retirement.
- 2—Disability retirement.
- 3—Survivor payment—Option 3.
- 4—Survivor payment—children, spouse, or dependent parent.
- 5—Surviving spouse with future benefit.
- 6—Former member with future benefit.

**Option Selected:**

Retirees select one of the following options at retirement:

- 1—Single life benefit.
- 2—Joint benefit with 1/2 to surviving cobeneficiary.
- 3—Joint and survivor benefit.
- 4—Joint benefit with 1/2 to either survivor. (No longer offered to members retiring.)

**Surviving Cobeneficiary:**

Retiree has predeceased the cobeneficiary.

**Surviving Retiree:**

Cobeneficiary has predeceased the retiree.

### Municipal Division

Amount of Benefit	Total (Columns 1–5)	Type of Benefit					
		1	2	3	4	5	6
\$1–\$250	125	110	3	0	11	1	176
\$251–\$500	214	174	21	0	17	2	222
\$501–\$750	274	189	53	3	26	3	146
\$751–\$1,000	278	160	87	1	27	3	86
\$1,001–\$1,250	389	202	157	2	28	0	43
\$1,251–\$1,500	302	171	121	0	9	1	26
\$1,501–\$1,750	258	149	104	1	4	0	24
\$1,751–\$2,000	217	147	62	5	3	0	11
Over \$2,000	884	784	84	5	11	0	26
<b>Totals</b>	<b>2,941</b>	<b>2,086</b>	<b>692</b>	<b>17</b>	<b>136</b>	<b>10</b>	<b>760</b>

Amount of Benefit	Option Selected					
	1	2	3	4	Surviving Cobeneficiary	Surviving Retiree
\$1–\$250	66	3	21	0	20	3
\$251–\$500	98	8	25	2	54	8
\$501–\$750	107	15	40	2	64	14
\$751–\$1,000	127	21	47	1	48	3
\$1,001–\$1,250	163	49	82	6	51	8
\$1,251–\$1,500	121	52	75	8	27	9
\$1,501–\$1,750	101	51	76	2	14	9
\$1,751–\$2,000	92	28	66	1	17	5
Over \$2,000	336	197	281	7	34	13
<b>Totals</b>	<b>1,211</b>	<b>424</b>	<b>713</b>	<b>29</b>	<b>329</b>	<b>72</b>

## Statistical Section

### Schedule of Retirees and Survivors by Type of Benefit

As of December 31, 2002

#### Types of Benefits:

- 1—Age and service retirement.
- 2—Disability retirement.
- 3—Survivor payment—Option 3.
- 4—Survivor payment—children, spouse, or dependent parent.
- 5—Surviving spouse with future benefit.
- 6—Former member with future benefit.

#### Option Selected:

Retirees select one of the following options at retirement:

- 1—Single life benefit.
- 2—Joint benefit with 1/2 to surviving cobeneficiary.
- 3—Joint and survivor benefit.
- 4—Joint benefit with 1/2 to either survivor. (No longer offered to members retiring.)

#### Surviving Cobeneficiary:

Retiree has predeceased the cobeneficiary.

#### Surviving Retiree:

Cobeneficiary has predeceased the retiree.

### Judicial Division

Amount of Benefit	Type of Benefit						
	Total (Columns 1–5)	1	2	3	4	5	6
\$1–\$250	2	2	0	0	0	0	2
\$251–\$500	14	13	1	0	0	0	1
\$501–\$750	6	5	1	0	0	0	4
\$751–\$1,000	7	4	0	0	3	0	3
\$1,001–\$1,250	6	6	0	0	0	0	3
\$1,251–\$1,500	20	14	3	0	3	0	2
\$1,501–\$1,750	19	15	1	0	2	1	0
\$1,751–\$2,000	9	7	0	0	2	0	1
Over \$2,000	140	120	14	0	6	0	1
<b>Totals</b>	<b>223</b>	<b>186</b>	<b>20</b>	<b>0</b>	<b>16</b>	<b>1</b>	<b>17</b>

Amount of Benefit	Option Selected				Surviving Cobeneficiary	Surviving Retiree
	1	2	3	4		
\$1–\$250	0	0	1	0	1	0
\$251–\$500	5	2	1	0	6	0
\$501–\$750	1	1	1	0	2	1
\$751–\$1,000	1	0	0	0	3	0
\$1,001–\$1,250	3	0	2	1	0	0
\$1,251–\$1,500	4	0	5	1	7	0
\$1,501–\$1,750	1	3	5	0	6	1
\$1,751–\$2,000	1	0	1	0	4	1
Over \$2,000	29	25	43	4	30	3
<b>Totals</b>	<b>45</b>	<b>31</b>	<b>59</b>	<b>6</b>	<b>59</b>	<b>6</b>

## Schedule of Average Benefit Payments

Year Retired	Years of Service Credit					
	0-10	10-15	15-20	20-25	25-30	30+
<b>Period 1/1/02 to 12/31/02</b>						
Average monthly benefit	\$322	\$653	\$1,175	\$1,834	\$2,649	\$3,769
Average highest average salary	\$1,961	\$2,303	\$2,909	\$3,565	\$4,150	\$5,015
Number of service retirees	187	219	178	747	639	1,712
<b>Period 1/1/01 to 12/31/01</b>						
Average monthly benefit	\$361	\$738	\$1,121	\$1,796	\$2,660	\$3,646
Average highest average salary	\$2,181	\$2,591	\$2,777	\$3,504	\$4,193	\$4,872
Number of service retirees	158	193	137	824	708	1,559
<b>Period 1/1/00 to 12/31/00</b>						
Average monthly benefit	\$334	\$746	\$1,042	\$1,770	\$2,527	\$3,468
Average highest average salary	\$2,004	\$2,680	\$2,567	\$3,466	\$4,018	\$4,652
Number of service retirees	160	201	168	819	615	1,599
<b>Period 1/1/99 to 12/31/99</b>						
Average monthly benefit	\$351	\$659	\$1,039	\$1,591	\$2,387	\$3,385
Average highest average salary	\$2,117	\$2,495	\$2,836	\$3,278	\$3,934	\$4,551
Number of service retirees	149	193	162	820	553	1,513
<b>Period 1/1/98 to 12/31/98</b>						
Average monthly benefit	\$296	\$611	\$975	\$1,586	\$2,194	\$3,293
Average highest average salary	\$1,815	\$2,296	\$2,543	\$3,249	\$3,709	\$4,398
Number of service retirees	153	191	160	754	488	1,059
<b>Period 1/1/97 to 12/31/97</b>						
Average monthly benefit	\$600	\$828	\$1,159	\$1,588	\$2,171	\$3,097
Average highest average salary	\$2,011	\$2,395	\$2,716	\$3,322	\$3,727	\$4,170
Number of service retirees	322	308	277	775	556	736
<b>Period 1/1/96 to 12/31/96</b>						
Average monthly benefit	\$599	\$800	\$1,023	\$1,514	\$2,200	\$3,211
Average highest average salary	\$1,917	\$2,298	\$2,444	\$3,098	\$3,671	\$4,169
Number of service retirees	304	313	265	714	374	559
<b>Period 1/1/95 to 12/31/95</b>						
Average monthly benefit	\$628	\$797	\$1,082	\$1,544	\$2,190	\$3,248
Average highest average salary	\$1,964	\$2,242	\$2,450	\$3,043	\$3,526	\$4,119
Number of service retirees	337	318	286	724	466	519
<b>Period 1/1/94 to 12/31/94</b>						
Average monthly benefit	\$614	\$755	\$1,121	\$1,574	\$2,225	\$3,243
Average highest average salary	\$2,004	\$2,168	\$2,449	\$3,068	\$3,507	\$4,050
Number of service retirees	349	332	284	724	477	512
<b>Period 1/1/93 to 12/31/93</b>						
Average monthly benefit	\$591	\$853	\$1,080	\$1,701	\$2,406	\$3,270
Average highest average salary	\$2,022	\$2,247	\$2,378	\$3,212	\$3,749	\$3,955
Number of service retirees	324	356	343	901	627	677

### Schedule of Affiliated Employers

#### State Category

##### Agencies and Instrumentalities

Colorado Association of School Boards  
Colorado Council on the Arts  
Colorado High School Activities Association  
Colorado Public Employees' Retirement Association  
Colorado Student Loan Program  
Colorado Water Resources and Power Development Authority  
CoverColorado  
Department of Agriculture  
Department of Corrections  
Department of Education  
Department of Health Care Policy and Financing  
Department of Human Services  
Department of Labor and Employment  
Department of Law  
Department of Local Affairs  
Department of Military and Veterans Affairs  
Department of Natural Resources  
Department of Personnel and Administration  
Department of Public Health and Environment  
Department of Public Safety  
Department of Regulatory Agencies  
Department of Revenue  
Department of State  
Department of the Treasury  
Department of Transportation  
Fire and Police Pension Association  
General Assembly  
Joint Budget Committee  
Judicial Department  
Legislative Council  
Office of the District Attorneys  
Office of the Governor  
Office of Legislative Legal Services  
Office of the Lieutenant Governor  
Office of the State Auditor  
Pinnacle Assurance  
School for the Deaf and the Blind  
Special District Association of Colorado  
State Historical Society

##### Institutions of Higher Education

Adams State College  
Aims Community College  
Arapahoe Community College  
Auraria Higher Education Center  
Aurora Community College  
Colorado Mountain College  
Colorado Northwestern Community College  
Colorado School of Mines  
Colorado State University  
Commission on Higher Education  
Denver Community College  
Fort Lewis College  
Front Range Community College  
Lamar Community College  
Lowry Higher Education Center

Mesa State College  
Metropolitan State College of Denver  
Morgan Community College  
Northeastern Junior College  
Otero Junior College  
Pikes Peak Community College  
Pueblo Vocational Community College  
Red Rocks Community College  
State Board for Community Colleges and Occupational Education  
The State Colleges in Colorado  
Trinidad State Junior College  
University of Colorado at Boulder  
University of Colorado at Colorado Springs  
University of Colorado at Denver  
University of Colorado Health Sciences Center  
University of Northern Colorado  
University of Southern Colorado  
Western State College

#### School Category

##### Adams County

Adams County School District 14  
Bennett School District 29J  
Brighton School District 27J  
Mapleton School District 1  
Northglenn-Thornton School District 12  
Strasburg School District 31J  
Westminster School District 50

##### Alamosa County

Alamosa County School District Re-11J  
Sangre de Cristo School District Re-22J

##### Arapahoe County

Adams-Arapahoe School District 28J  
Byers School District 32J  
Cherry Creek School District 5  
Deer Trail School District 26J  
Englewood School District 1  
Littleton School District 6  
Sheridan School District 2

##### Archuleta County

Archuleta County School District 50 Jt

##### Baca County

Campo School District RE-6  
Pritchett School District RE-3  
Springfield School District RE-4  
Vilas School District RE-5  
Walsh School District RE-1

##### Bent County

Las Animas School District RE-1  
McClave School District RE-2

##### Boulder County

Boulder Valley School District RE2  
St. Vrain Valley School District RE1J

## Schedule of Affiliated Employers

### Chaffee County

Buena Vista School District R-31  
Salida School District R-32(J)

### Cheyenne County

Cheyenne County School District Re-5  
Kit Carson School District R-1

### Clear Creek County

Clear Creek School District RE-1

### Conejos County

North Conejos School District RE1J  
Sanford School District 6J  
South Conejos School District RE 10

### Costilla County

Centennial School District R-1  
Sierra Grande School District R-30

### Crowley County

Crowley County School District RE-1

### Custer County

Custer County Consolidated School District C-1

### Delta County

Delta County School District 50(J)

### Dolores County

Dolores County School District Re No. 2

### Douglas County

Douglas County School District Re 1

### Eagle County

Eagle County School District Re 50

### El Paso County

Academy School District #20  
Calhan School District RJ1  
Cheyenne Mountain School District 12  
Colorado Springs School District 11  
Edison School District 54 Jt  
Ellicott School District 22  
Falcon School District 49  
Fountain School District 8  
Hanover School District 28  
Harrison School District 2  
Lewis-Palmer School District 38  
Manitou Springs School District 14  
Miami/Yoder School District 60 Jt  
Peyton School District 23 Jt  
Widefield School District 3

### Elbert County

Agate School District 300  
Big Sandy School District 100J  
Elbert School District 200  
Elizabeth School District C-1  
Kiowa School District C-2

### Fremont County

Canon City School District Re-1  
Cotopaxi School District Re-3  
Florence School District Re-2

### Garfield County

Garfield School District 16  
Garfield School District Re-2  
Roaring Fork School District Re-1

### Gilpin County

Gilpin County School District Re-1

### Grand County

East Grand School District 2  
West Grand School District 1

### Gunnison County

Gunnison Watershed School District Re1J

### Hinsdale County

Hinsdale County School District Re-1

### Huerfano County

Huerfano School District Re-1  
La Veta School District Re-2

### Jackson County

North Park School District R-1

### Jefferson County

Jefferson County School District R-1

### Kiowa County

Eads School District Re-1  
Plainview School District Re-2

### Kit Carson County

Arriba-Flagler Consolidated School District No. 20  
Bethune School District R-5  
Burlington School District Re-6J  
Hi-Plains School District R-23  
Stratton School District R-4

### La Plata County

Bayfield School District 10Jt-R  
Durango School District 9-R  
Ignacio School District 11 Jt

### Lake County

Lake County School District R-1

### Larimer County

Park School District R-3  
Poudre School District R-1  
Thompson School District R-2J

### Las Animas County

Aguilar Reorganized School District 6  
Branson Reorganized School District 82  
Hoehne Reorganized School District 3  
Kim Reorganized School District 88  
Primero Reorganized School District 2  
Trinidad School District 1

### Lincoln County

Genoa/Hugo School District C-113  
Karval School District Re 23  
Limon School District Re 4J

### Schedule of Affiliated Employers

#### Logan County

Buffalo School District Re-4  
Frenchman School District Re-3  
Plateau School District Re-5  
Valley School District Re-1

#### Mesa County

De Beque School District 49 Jt  
Mesa County Valley School District 51  
Plateau Valley School District 50

#### Mineral County

Creede Consolidated School District 1

#### Moffat County

Moffat County School District Re No. 1

#### Montezuma County

Dolores School District RE 4A  
Mancos School District Re-6  
Montezuma-Cortez School District Re 1

#### Montrose County

Montrose County School District Re-1J  
West End School District Re-2

#### Morgan County

Brush School District Re-2 (J)  
Fort Morgan School District Re-3  
Weldon Valley School District Re-20 (J)  
Wiggins School District Re-50 (J)

#### Otero County

Cheraw School District 31  
East Otero School District R1  
Fowler School District R4J  
Manzanola School District 3J  
Rocky Ford School District R2  
Swink School District 33

#### Ouray County

Ouray School District R-1  
Ridgway School District R-2

#### Park County

Park County School District Re-2  
Platte Canyon School District 1

#### Phillips County

Haxtun School District Re-2J  
Holyoke School District Re-1J

#### Pitkin County

Aspen School District 1

#### Prowers County

Granada School District Re-1  
Holly School District Re-3  
Lamar School District Re-2  
Wiley School District Re-13 Jt

#### Pueblo County

Pueblo City School District 60  
Pueblo County Rural School District 70

#### Rio Blanco County

Meeker School District RE1  
Rangely School District RE4

#### Rio Grande County

Del Norte School District C-7  
Monte Vista School District C-8  
Sargent School District Re-33J

#### Routt County

Hayden School District Re 1  
South Routt School District Re 3  
Steamboat Springs School District Re 2

#### Saguache County

Center Consolidated School District 26 Jt  
Moffat School District 2  
Mountain Valley School District Re 1

#### San Juan County

Silverton School District 1

#### San Miguel County

Norwood School District R-2J  
Telluride School District R-1

#### Sedgwick County

Julesburg School District Re 1  
Platte Valley School District Re3

#### Summit County

Summit School District Re 1

#### Teller County

Cripple Creek-Victor School District Re-1  
Woodland Park School District RE-2

#### Washington County

Akron School District R-1  
Arickaree School District R-2  
Lone Star School District 101  
Otis School District R-3  
Woodlin School District R-104

#### Weld County

Ault-Highland School District Re-9  
Briggsdale School District Re-10  
Eaton School District Re-2  
Fort Lupton School District Re-8  
Gilcrest School District Re-1  
Greeley School District 6  
Johnstown-Milliken School District Re-5J  
Keenesburg School District Re-3  
Pawnee School District Re-12  
Platte Valley School District Re-7  
Prairie School District Re-11  
Windsor School District Re-4

#### Yuma County

Idalia School District RJ-3  
Liberty School District J-4  
Wray School District RD-1  
Yuma School District 1

## Schedule of Affiliated Employers

### Boards of Cooperative Educational Services (BOCES)

Centennial BOCES  
 East Central BOCES  
 Expeditionary Learning School BOCES  
 Grand Valley BOCES  
 Mount Evans BOCES  
 Mountain BOCES  
 Northeast BOCES  
 Northwest Colorado BOCES  
 Pikes Peak BOCES  
 Rio Blanco BOCES  
 Santa Fe Trail BOCES  
 South Central BOCES  
 South Platte Valley BOCES  
 Southeastern BOCES  
 Uncompahgre BOCES

### Boards of Cooperative Services (BOCS)

San Juan BOCS  
 San Luis Valley BOCS  
 Southwest BOCS

### Vocational Schools

Delta-Montrose Area Vocational School  
 San Juan Basin Area Vocational School

### Municipal Division

Adams and Jefferson County Hazardous Response Authority  
 Adams County Housing Authority  
 Alamosa Housing Authority  
 Arkansas Valley Regional Library Service System  
 Aurora Housing Authority  
 Baca Grande Water and Sanitation District  
 Beulah Water Works District  
 Black Hawk-Central City Sanitation District  
 Blanca-Fort Garland Metropolitan District  
 Boxelder Sanitation District  
 Brush Housing Authority  
 Carbon Valley Park and Recreation District  
 Castle Pines Metropolitan District  
 Castle Pines North Metropolitan District  
 Center Housing Authority  
 City of Alamosa  
 City of Boulder  
 City of Colorado Springs  
 City of Fort Morgan  
 City of Manitou Springs  
 City of Pueblo  
 City of Wray  
 City of Yuma  
 Collbran Conservancy District  
 Colorado District Attorneys' Council  
 Colorado Housing Finance Authority  
 Colorado School District Self Insurance Pool  
 Colorado Springs Utilities  
 Columbine Knolls-Grove Metropolitan Recreation District  
 Costilla Housing Authority  
 Cunningham Fire Protection District  
 Douglas Public Library District  
 Durango Fire and Rescue Authority

East Cheyenne Groundwater Management District  
 East Larimer County Water District  
 Eastern Rio Blanco Parks and Recreation Department  
 Eaton Housing Authority  
 Elbert County Library District  
 Estes Valley Public Library District  
 Forest Lakes Metropolitan District  
 Fremont Conservation District  
 Fremont Sanitation District  
 Garfield County Housing Authority  
 Grand Valley Fire Protection District  
 Green Mountain Water and Sanitation District  
 Housing Authority of Arriba  
 Housing Authority of the City of Boulder  
 Housing Authority of the Town of Limon  
 Lamar Housing Authority  
 Lamar Utilities Board  
 Left Hand Water District  
 Longmont Housing Authority  
 Longs Peak Water District  
 Louisville Fire Protection District  
 Meeker Regional Library District  
 Meeker Sanitation District  
 Memorial Hospital—Colorado Springs  
 Montrose Fire Protection District  
 Montrose Recreation District  
 Monument Sanitation District  
 Morgan Conservation District  
 Mountain View Fire Protection District  
 Mountain Village Metropolitan District  
 Mountain Water and Sanitation District  
 Niwot Sanitation District  
 North Chaffee County Regional Library  
 Northeast Colorado Health Department  
 Northeastern Colorado Association of Local Governments  
 Park Center Water District  
 Pathfinder Regional Library Service System  
 Pine Drive Water District  
 Plains and Peaks Regional Library Services System  
 Pueblo City-County Health Department  
 Pueblo Library District  
 Rampart Regional Library District  
 Rangely Regional Library District  
 Red Feather Mountain Library District  
 Red, White and Blue Fire Protection District  
 Rifle Fire Protection District  
 Rio Blanco Fire Protection District  
 Rio Blanco Water Conservancy District  
 Routt County Conservation District  
 Sable-Altura Fire Protection District  
 San Luis Valley Development Resources Group  
 San Luis Valley Water Conservancy District  
 San Miguel County Public Library  
 San Miguel Regional and Telluride Housing Authority  
 Scientific and Cultural Facilities District  
 Sheridan Sanitation District #1  
 Soldier Canyon Filter Plant  
 Southwest Library Services

### Schedule of Affiliated Employers

Steamboat II Water and Sanitation District  
Steamboat Springs Rural Fire Protection District  
St. Vrain Sanitation District  
Three Rivers Regional Library System  
Town of Bayfield  
Town of Crawford  
Town of Dinosaur  
Town of Eckley  
Town of Estes Park  
Town of Firestone  
Town of Lake City  
Town of Lochbuie  
Town of Mountain Village  
Town of Platteville  
Town of Rico  
Town of Rye  
Town of Seibert  
Town of Silver Plume  
Tri-County Health Department  
Upper Colorado Environmental Plant Center  
Walker Field Airport Authority  
Washington-Yuma Counties Combined Communications Center  
Weld County Department of Public Health and Environment  
West Greeley Conservation District  
Western Rio Blanco Metropolitan Recreation and Park District  
Windsor-Severance Library District  
Yuma Housing Authority

### Judicial Division

1st-23rd District Court  
24th District-Denver Probate Court  
25th District-Denver Juvenile Court  
Adams County Court  
Alamosa County Court  
Arapahoe County Court  
Archuleta County Court  
Baca County Court  
Bent County Court  
Boulder County Court  
Broomfield County Court  
Chaffee County Court  
Cheyenne County Court  
Clear Creek County Court  
Conejos County Court  
Costilla County Court  
Court of Appeals  
Crowley County Court  
Custer County Court  
Delta County Court  
Denver County Court  
Dolores County Court  
Douglas County Court  
Eagle County Court  
Elbert County Court  
El Paso County Court  
Fremont County Court  
Garfield County Court  
Gilpin County Court

Grand County Court  
Gunnison County Court  
Hinsdale County Court  
Huerfano County Court  
Jackson County Court  
Jefferson County Court  
Kiowa County Court  
Kit Carson County Court  
Lake County Court  
La Plata County Court  
Larimer County Court  
Las Animas County Court  
Lincoln County Court  
Logan County Court  
Mesa County Court  
Mineral County Court  
Moffat County Court  
Montezuma County Court  
Montrose County Court  
Morgan County Court  
Otero County Court  
Ouray County Court  
Park County Court  
Phillips County Court  
Pitkin County Court  
Prowers County Court  
Pueblo County Court  
Rio Blanco County Court  
Rio Grande County Court  
Routt County Court  
Saguache County Court  
San Juan County Court  
San Miguel County Court  
Sedgwick County Court  
Summit County Court  
Supreme Court  
Teller County Court  
Washington County Court  
Weld County Court  
Yuma County Court

## Health Care Program

Legislation in 1985 established the PERA Health Care Fund and the Health Care Program, which began offering benefit recipients and their qualified dependents health care coverage on July 1, 1986. Since inception, the Fund has received contributions from affiliated employers. On July 1, 1999, the Fund was converted to the PERA Health Care Trust Fund (HCTF).

The results of Colorado PERA's 1999 actuarial valuation allowed PERA to increase employer contribution allocations to the HCTF, effective January 1, 2001, pursuant to House Bill 00-1458. HB 1458 provides for 30 percent of the amount needed to reduce any overfunding in the PERA retirement trust funds to be allocated to the HCTF. This, in addition to the permanent allocation of 1.1 percent of salaries, could improve the HCTF's financial condition and support future increases in the PERA retiree health care premium subsidy, when approved by legislation.

Contributions to the HCTF from affiliated employers, as a percentage of member salaries, are as follows:

- From 7/1/85 through 7/1/99: 0.8 percent
- From 7/1/99 through 12/31/00: 1.1 percent
- From 1/1/01 through 12/31/01: State and School Division 1.42 percent, Municipal Division 1.96 percent, and Judicial Division 4.37 percent.
- From 1/1/02 through 12/31/02: State and School Division 1.64 percent, Municipal Division 2.31 percent, and Judicial Division 4.37 percent.

Colorado PERA subsidizes the monthly premium for benefit recipients enrolled in its health care program. In 2002, the maximum subsidies for benefit recipients were \$230 per month for benefit recipients under age 65 and not eligible for Medicare, and \$115 per month for benefit recipients age 65 or older or under age 65 and on Medicare. If the PERA benefit is based on less than 20 years of PERA service credit, the subsidy is reduced 5 percent for each year of service (\$11.50 or \$5.75, respectively). Monthly premiums for participants depend on the plan selected, the PERA subsidy amount, Medicare enrollment, and the number of persons covered.

Legislation enacted in 1999 allowed staff to develop and market a health benefits program for PERA's benefit recipients, and for active employees and eligible dependents of those PERA-affiliated employers who elect to participate in the program. In 2000, the PERA Health Care Program was renamed PERACare. On January 1, 2001, PERACare became operational. At the end of 2002, 32 PERA-affiliated employers had opted to provide PERACare (including dental and vision) for approximately 1,000 active employees.

The Board voted in 2002 to propose 2003 legislation that would transfer a portion of a PERA member's service credit purchase payment for non-PERA covered employment to the HCTF when a member retires or dies with survivor benefits paid. This transfer better funds the cost of future retiree health care premium subsidies that the HCTF incurs when a member purchases service credit. Senate Bill 98 ("Modification of PERA Benefits Provisions"), signed by the Governor on June 5, 2003, includes this provision.

The PERACare program consisted of the following plans in 2002:

- Two self-insured plans administered by Mutual of Omaha (a preferred provider organization (PPO) plan for pre-Medicare participants, and a

Medicare supplement plan). Each plan offers two levels of coverage, and is available worldwide. Caremark serves as the prescription benefit manager for both self-insured plans.

- Three HMO plans [Kaiser Permanente HMO, Rocky Mountain Health Plans (formerly Rocky Mountain HMO), and CIGNA HMO] for active employees and pre-Medicare participants. Each HMO plan offers three different levels of benefits, in addition to a Point-of-Service (POS) plan with out-of-network providers after a deductible is met.
- One PPO plan from one HMO (Rocky Mountain Health Plans HMO) for active employees and pre-Medicare participants in the same counties in which this HMO is offered.
- Two HMO plans (Kaiser Permanente HMO and Rocky Mountain Health Plans HMO) for Medicare participants.
- Two dental care plans (a dental HMO from CIGNA and a PPO plan from United Concordia), and four vision plans (two from Cole Managed Vision Plan, and two from Vision Service Plan).
- PERA contracted with Medical Quest to provide an online directory of physicians, hospitals, and other providers who contract with PERACare's plans.

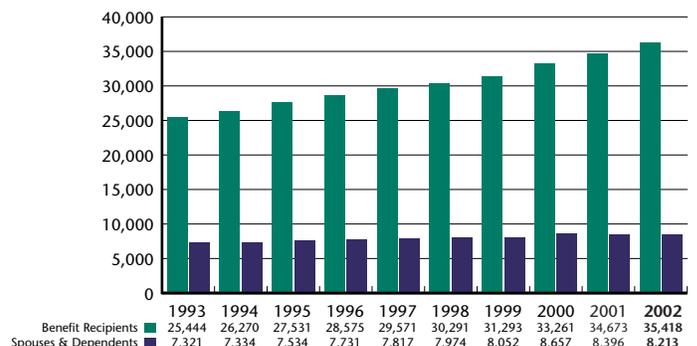
In other health-related developments in 2002, the Board of Trustees commissioned a Health Care Study Team to evaluate the value of the PERACare program and assess the future of PERACare compared to other options available in today's marketplace for health benefits.

PERA worked with an independent consultant to benchmark the current PERACare program against the competitive market, understand the value the program delivers today based on participant feedback, and outline feasible alternatives to the current program and its delivery models. In early 2002, the Ad Hoc Committee on Health Care reported to the Board the following:

- PERACare provides a unique value to many benefit recipients and employers and is a strong alternative for employers.
- Survey results showed that enrollees generally are satisfied with PERACare.
- PERA is as well-equipped as others to handle the challenges of health care programs.

Based on these findings, the Board accepted the Committee's recommendation that Colorado PERA continue to offer health care programs.

### Health Care Program Enrollments



## Statistical Section

### Life Insurance Program

Colorado PERA has provided its members with access to voluntary supplemental life insurance benefits since 1956 when it contracted with New York Life Insurance Company for coverage. The PERA Board of Trustees transferred the plan underwritten by New York Life to Rocky Mountain Life Insurance Company in 1988. In December 2000, Rocky Mountain Life received final regulatory approval to merge with its Anthem Life affiliate, giving the current decreasing-term life coverage the Anthem Life name. New York Life retained coverage for members and retirees having paid-up policies, and certain disability retirees with waivers of premiums.

Colorado PERA has offered another decreasing-term life insurance policy since 1969. The plan is underwritten by the Prudential Insurance Company and is offered through the National Conference on Public Employee Retirement Systems.

In 1986, PERA assumed responsibility from the State of Colorado for administering two plans from Anthem Life (formerly Rocky Mountain Life) for retired state employees. These are both closed groups with no provision for new participants.

Active members may join one or both of the decreasing-term life insurance plans offered by Anthem Life or Prudential. The coverage may continue into retirement or after leaving PERA-covered employment if the PERA member retains their PERA account. During the annual open enrollment period, members enrolling are not required to furnish evidence of good health for themselves or their dependents. Members may enroll outside the open enrollment period, but must provide a statement of good health.

### Life Insurance Program Enrollment

Year	Anthem Life	Prudential	Anthem Life (Closed Group)	New York Life <sup>1</sup>	Total Enrollments
1993	36,857	16,899	3,051	—	56,807
1994	36,265	16,555	2,884	—	55,704
1995	36,979	16,032	2,576	18,738	74,325
1996	37,062	17,135	2,489	16,297	72,983
1997	37,382	17,270	2,154	15,936	72,742
1998	37,477	17,327	1,997	15,513	72,314
1999	37,901	17,622	1,855	15,081	72,459
2000	37,883	17,606	1,678	14,336	71,503
2001	37,427	17,759	1,406	14,021	70,613
<b>2002</b>	<b>38,300</b>	<b>18,360</b>	<b>1,373</b>	<b>13,710</b>	<b>71,743</b>

<sup>1</sup> New York Life, with paid-up coverage and no premiums assessed, not listed before 1995.

### Life Insurance Program Claims

Year	Anthem Life		Prudential		Anthem Life (Closed Group)		New York Life <sup>2</sup>		Total Program	
	Amt. of Claims Paid	No. of Claims Paid <sup>1</sup>	Amt. of Claims Paid	No. of Claims Paid <sup>1</sup>	Amt. of Claims Paid	No. of Claims Paid <sup>1</sup>	Amt. of Claims Paid	No. of Claims Paid	Amt. of Claims Paid	No. of Claims Paid <sup>1</sup>
1993	\$5,114,319	751	\$1,250,563	169	\$236,675	155	\$—	—	\$6,601,557	1,075
1994	5,241,796	876	1,384,378	223	265,185	177	—	—	6,891,359	1,276
1995	5,064,415	653	1,561,740	246	288,416	172	444,602	282	7,359,173	1,353
1996	4,660,358	599	1,462,712	210	268,815	157	399,868	288	6,791,753	1,254
1997	5,116,641	679	1,469,340	226	171,175	127	378,422	282	7,135,578	1,314
1998	4,875,713	691	1,731,344	283	246,473	149	395,834	333	7,249,364	1,456
1999	4,700,668	703	1,415,914	256	265,141	138	412,966	328	6,794,689	1,425
2000	4,953,863	741	1,508,591	264	221,072	155	417,428	335	7,100,954	1,495
2001	5,111,123	705	1,579,714	227	241,722	139	345,798	279	7,278,357	1,350
<b>2002</b>	<b>\$5,749,934</b>	<b>784</b>	<b>\$1,875,580</b>	<b>311</b>	<b>\$207,264</b>	<b>152</b>	<b>\$446,384</b>	<b>380</b>	<b>\$8,279,162</b>	<b>1,627</b>

<sup>1</sup> Number of claims paid not available before 1991.

<sup>2</sup> New York Life, with paid-up coverage and no premiums assessed, not listed before 1995.

## Staff Members of Colorado Public Employees' Retirement Association

As of May 1, 2003

Diane Ahonen	Mike Gangl	Jim Liptak	Taksheka Ross
Deb Akers	Katherine Garcia	Tina Little	Beth Roybal
Denise Allen-Sindt	Dennis Gatlin	Anthony Lopezi	Lindsay Roybal
Mike Anacker	Kimberlee Giffen	David Lukkes	Julie Saad
Cynthia Andersen	Edie Golden	Dan Lynch	Najibullah Salih
Jerry Andersen	Blanca Gonzalez	David Lynch	Jessica Sanchez
Dennis Anderson	Claudia Gonzalez	Linda Macias	Vicki Sandstedt
Amanda Andrews	Penny Goodman	Rochelle Malik	Lisa Savaleta
Martha Argo	Nancy Graham	Amber Malley	Tom Saylor
Miriam Armendariz	Rob Gray	Karen Malone	Don Schaefer
Gloria Arteaga	Tom Greenlee	Julie Mann	Aubre Schneider
Lynda Ary	Karl Greve	Tom Mann	Jennifer Schreck
Joshua Ashton	George Griesinger	Martha Martinez	Kevin Scott
Cynthia Baca	Paula Gurley	David Martus	Tracy Severa
Malia Baird	Patty Haas	David Maurek	Steven Shecter
Ron Baker	David Hack	Stacia McBride	Susan Sheldon
Brian Bandimere	Drucie Haddock	Pamela McCormick	Brandon Shepherd
Anne Bandy	Douglas Hall	Tim McCormick	Tom Shofner
Becky Barnett	LuAnn Hansen	Tom McLaughlin	Vincenzo Sinfonico
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Gary Bender	Kelly Hart	Brenda Meidl	Patricia Snyder
Jenna Bendt	Barbara Hawkins	Louise Merriweather	Matt Spicher
Leona Bennett	Virginia Heimann	James Mestek	John Spielman
Valerie Brake	Rynee Helmig	Dan Metzler	Jason Spritzer
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Steven Brown	Bob Henson	Mike Miller	Kent Staton
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Karen Candelaria	Peggy Hogg	Gregory Moran	Chris Talbot
Lydia Carlson	Drew Holland	Mary Morrison	Greg Tallarico
Kevin Carpenter	Tony Hornsby	Richard Mortenson	Keely Tallarico
Adam Chadwick	Mary Kay Howard	Mellany Moyer	Ann Tary
Larry Ciacio	Chun Fang Hsia	Kay Muller	Sharon Tave
Marjorie Conrad	Yo'Lauder Hunter	Jesse Murillo	Aaron Taylor
David Conway	Greg Hybbeneth	James Murphy	Wendy Tenzyk
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Barbara Crosman	Dan Jensen	Aaron Norton	Sandra Trujillo
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Christopher Fairbairn	Dave Kurtz	Chris Renna	Evan Williams
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Dennis Fischer	Judy LaMaster	Hal Riedemann	Carole Sue Woodrich
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Anna Frantz	Rick Larson	Daryl Roberts	Karen Woodson
Thomas Frey	Jim Lavan	Robin Roberts	Tim Works
Nancy Fuller	Billy Lechman	Gayle Rodd	James Young
Carrie Gabriel	Wanda Lestinsky	Luz Rodriguez	Nancy Young
Heather Gallagher	Margaret Lincoln	Deneise Ross	Lori Zahlmann



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